

**WILL FEDERAL GOVERNMENT COMPUTERS BE  
READY FOR THE YEAR 2000?**

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**JOINT HEARING**  
BEFORE THE  
SUBCOMMITTEE ON TECHNOLOGY  
OF THE  
COMMITTEE ON SCIENCE  
AND THE  
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,  
INFORMATION, AND TECHNOLOGY  
OF THE  
COMMITTEE ON GOVERNMENT REFORM  
AND OVERSIGHT  
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## **WILL FEDERAL GOVERNMENT COMPUTERS BE READY FOR THE YEAR 2000?**

**THURSDAY, JULY 10, 1997**

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE,  
SUBCOMMITTEE ON TECHNOLOGY, JOINT WITH THE  
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT,  
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT, IN-  
FORMATION, AND TECHNOLOGY

*Washington, DC.*

The Subcommittees met jointly at 10:10 a.m., in room 2318 of the Rayburn House Office Building, Hon. Constance A. Morella and Hon. Stephen Horn, Chairpersons of the Subcommittees, presiding.

Mrs. MORELLA. Ladies and gentlemen, I'm going to call to order our joint hearing of the Science Committee and the Government Reform and Oversight Committee, the two Subcommittees that are very much involved with the Year 2000, and welcome all of you.

Over a year ago, the Government Reform and Oversight Committee and the Science Committee began our joint review of the Year 2000 computer problem. Together with my good friend from California, Congressman Steve Horn, we have pushed for immediate corrective action to solve this problem, especially in the Federal Government.

We felt that this was necessary because experts who testified before us last year said the Federal Government was dropping the ball. Last year's hearings left us startled and not very confident about the Federal Government's ability to successfully meet the challenges of the date conversion problem. We came to the inescapable conclusion that many Federal Government departments and Agencies were simply not moving with the necessary dispatch to become Year 2000 compliant in a timely manner.

Without greater urgency, and unless senior agency management took immediate aggressive action, Federal Government Agencies were placing themselves at risk of being unable to provide services or perform functions that are critical to their mission and vital to the American public. At that time, few federal Agencies were responding to the problem at all, let alone in the aggressive manner necessary to address the issue. That's why we inserted the legislative language in last year's Treasury, Postal and General Government Appropriations bill, directing the Office of Management and Budget to create a national federal strategy and submit it to Congress in February with the President's Fiscal Year 1997 budget.

We asked OMB to provide an accurate estimate of what it would cost to convert all federal computers from two-digit to four-digit fields and to map out a detailed plan for each agency and a time-

table to ensure that all government computers will continue to operate in the Year 2000. On February 6 of this year, OMB submitted this federal strategy in its report "Getting Federal Computers Ready for 2000." The February 1997 strategy relies heavily on the involvement of Senior Program Managers and Chief Information Officers in each agency.

Under this strategy, the CIOs and Senior Program Managers will interact with the newly-formed CIO Council and the Year 2000 Interagency Working Group under the supervision of OMB to craft a solution for each agency. The CIO Council was established in the 104th Congress through the Information Technology Management Reform Act of 1996, which we've come to know as the Clinger-Cohen Act. And was enacted largely with the assistance of Congressman Horn.

Since the submission of the February 1997 OMB strategy, we've been working closely with the Executive Branch to make sure that the Federal Government remains on track with its Year 2000 efforts. As part of this oversight, we have helped institute a quarterly reporting requirement to OMB for each agency and identified management information that was necessary to monitor each agency's progress. On June 23, 1997, we received the first quarterly report based on information OMB received from the federal Agencies by May 15.

The next agency reports are due to OMB on August 15, and subsequently every 3 months thereafter. Today's hearing will review the June 1997 progress report, and provide us with a snapshot of how far we've come in the implementation of the February 1997 OMB federal strategy. As the Federal Government moves forward in correcting the Year 2000 problem, I continue to have significant concerns regarding the government's ability to have its computer systems ready for the millennium date conversion.

Specifically, I'll mention some of my concerns. That the government wide estimate of \$2.8 billion, which was incidentally increased from the January 1997 estimate of \$2.3 billion, to correct the Year 2000 problem is a significant understatement. Another concern: that the Federal Government agency timetables and milestones submitted in the report are neither viable nor realistic. Third, that various Agencies are not allowing adequate time for the validation of converted systems.

For instance, there were several that had validation and implementation months the same, that there may not be enough accountability in the current system to effectively advance and monitor Federal Government Year 2000 efforts.

And that adequate attention government wide is being paid to other date-sensitive systems, such as the embedded computer chip problem, a concern that not enough attention is being given to the embedded computer chip problem.

Those are some of the concerns which I hope that we're going to be able to address today. As everyone in this room knows, we're all competing in a race against time to avert the impending computer catastrophe in the Year 2000. And the deadline we face is unforgiving. Time is running out. We have under 2.5 years left, less than about 1,000 days. What's that, about 29 months.

So much more work, however, clearly remains to be done, so I look forward to working with my colleagues and the distinguished panel before us this morning in using this hearing to review and reform our federal Year 2000 efforts so that we can provide adequate assurances to the American public that our Federal Government will not be bitten by the millennium bug.

I want to thank you all and turn over to the Chairman of the Subcommittee on Government Management Information and Technology, Congressman Horn, for his opening remarks.

Mr. HORN. Thank you very much. It's always a pleasure to work with the Subcommittee on Technology that also has a very broad interest in this.

The purpose of this joint hearing is to determine whether federal Agencies are taking the necessary steps to avoid a breakdown in government services at the turn of the century.

The people need to know, are federal Agencies moving fast enough on solving the Year 2000 problems? Are the agency timetables realistic and adequate to solve the problem before the unmovable deadline of midnight, December 31, 1999? Do the Agencies have sufficient management processes in place to monitor their Year 2000 efforts? Is there sufficient leadership in the Executive Branch?

Has the President of the United States made this an issue? He is one of the great communicators of this century. We need him to awaken the Nation to this very serious situation.

In brief, the President needs to use the bully pulpit, not only on the Executive Branch, where it has not been used; not only to involve the Cabinet, where they have to be involved, or it isn't going to happen, but also to the Nation generally. He needs to say, "We're serious about it and we need to get to work on it." That this is a problem.

We all know, as you get closer and closer to the Year 2000, you have a scarcity of resources that will increase the cost of doing business to solve these problems. We will be answering a lot of these questions today with the help of a new report provided by the Office of Management and Budget, though, but we need to begin with a brief review of the basics.

After midnight on the last day of 1999, computer systems in the United States and abroad using two digits to signify the year will automatically flash from 99 to 00. Many of these systems will interpret the digit 00 to mean the year 1900 instead of the Year 2000. Some systems understand the digits to mean no date at all.

In either case, the result could be malfunction, corruption of data, or simply shutdown. In effect, we're talking about a global computer virus.

During the last Congress, an investigation by the Subcommittee on Government Management Information and Technology first brought to light a near total lack of preparation by the Federal Government for the Year 2000 problem. Despite recent efforts by federal departments and Agencies, government officials are still unable to say whether the Federal Government's computers will be ready for the Year 2000.

Appearing before the House Appropriations Subcommittee on Treasury, Postal Service, and General Government on March 11,

1997, the Director of the Office of Management and Budget committed to furnish Congress with a quarterly report on federal progress toward correcting the Year 2000 computer problem.

The first quarterly report was transmitted to Congress on June 23, 1997.

It is based on data provided by all major departments and Agencies to OMB on May 15, 1997.

The OMB report raised the disturbing fact that some Agencies with the most critical responsibilities for providing public services are stuck at the starting gate.

Consider that, as of May 15, fully 18 out of 24 Agencies have yet to finish assessing the vulnerability of their computer systems to the Year 2000 problem.

Ten of the 24 Agencies have not proceeded far enough to complete any testing of software changes.

These are discouraging and worrisome statistics.

We're very concerned as well about whether the Agencies are using an appropriate definition of mission critical systems.

Some Agencies define mission critical to exclude vital contractor systems and systems that are used at individual field locations, while others list virtually every system without prioritizing them according to their role in the agency's mission.

Social Security began the Year 2000 effort, as we all know, in 1989. As of May 1997, it had completed only 50 percent of the changes necessary to avoid failure at the turn of the century.

That means an agency with foresight and resolve needed 8 years to get halfway through the problem.

Most federal Agencies began their Year 2000 efforts within the last 2 years. They do not have 8 years to implement a full solution.

These facts weigh heavily on us. We're responsible to the American people for the smooth functioning of the Federal Government.

Based on this report, we need to redouble our efforts. If the beginning of a solution to the federal Year 2000 problem is marked by a serious, effective government wide effort we have not yet I'm afraid reached the end of the beginning. Time is running out.

Our witnesses today will help us understand the meaning of this new report and answer our questions about the strength and weaknesses of the Federal Government's Year 2000 efforts.

We do thank you for appearing before us, and welcome you.

Mrs. MORELLA. Thank you, Congressman Horn, Chairman Horn. I'd like to now recognize the Ranking Member of this Subcommittee on Technology, Mr. Bart Gordon from Tennessee.

Mr. GORDON. Thank you.

I want to join my colleagues in welcoming everyone to this hearing on the Year 2000 computer problem.

There's been a great deal of press attention on this issue and federal Agencies are now actively engaged in solving the problem.

However, I remain concerned that this issue is still not taken seriously enough, considering the magnitude of the problem.

I believe this is the principal finding of the GAO Report.

Because of this, I still don't believe that the necessary financial and management resources have been dedicated to solving the problem.



This hearing today is important for two reasons. First, to stress the importance of fixing the federal computer systems and the problems that the Agencies are encountering as they work towards solutions.

Second, and perhaps more important, these hearings serve to increase attention to this problem by the general public.

I intend to focus on a few issues.

What will be the real cost to fix the federal computer systems. Already OMB has revised upwards by 20 percent its estimates of 5 months ago.

Is there adequate management structure in place to fix the problem by 2000?

And finally the issue of computer system interfaces. I am particularly concerned about this last topic.

Federal computer systems not only transfer data between Agencies, they do thousands of transactions with external computer systems.

Unless there is a coordinated plan for conversion or appropriate controls are in place, what will happen when systems are converted in haphazard fashion?

I'm also concerned about the level of communication that has occurred between the federal Agencies and the contractors and the state and local government concerning this interface issue.

Unless there is a comprehensive plan of action to address the data exchange issue, it won't matter how many resources we dedicate to fixing the federal computer systems.

I want to thank our witnesses for appearing today, and look forward to hearing your testimony.

Mrs. MORELLA. Thank you, Mr. Gordon.

I'd now like to recognize Mr. Davis from Illinois for any opening comments he may have.

Mr. DAVIS. Thank you very much, Madam Chairwoman. I'd like to commend you and Chairman Horn for convening this joint hearing regarding will the Federal Government computers be ready for the Year 2000.

I'd also like to acknowledge and thank our distinguished panel of witnesses for taking the time to come and share with us the status of current Federal Government efforts to correct the Year 2000 problem.

The Year 2000 issue is a very serious one. Computers that use two-digit date fields that I hear people talking about all over America will fail to recognize the century change on January 1, 2000.

I look forward to hearing the status of the current Federal Government efforts to correct the problem.

In addition, I look forward to hearing the timetables for having the Federal Government computers converted by the Year 2000.

Finally, I look forward to hearing what management processes and structures are in place to monitor the Federal Government Year 2000 efforts.

I am confident, and although I know that there are always predictions and fears of gloom and doom, but I am confident that the people of America have always been able to rise to the occasion.

And I am confident that we will be able to avert any major crisis by having the proper management and monitoring systems in place

to ensure that all government computers are converted before the Year 2000.

I thank you again, Madam Chairwoman, and look forward to hearing the testimony of our expert witnesses.

Mrs. MORELLA. Thank you, Mr. Davis, and thank you for your confidence.

Ms. Lofgren from California, who has been a leader in the area.

Ms. LOFGREN. I'll just wait to hear the testimony, Madam Chairwoman.

Mrs. MORELLA. Thank you.

Ms. Stabenow, I'm delighted to recognize you.

Ms. STABENOW. Thank you, Madam Chairwoman.

I wish to welcome our panelists as well and share the concerns about this issue.

I also, in my district in Michigan, I'm concerned as I talk with business people, particularly small business people, about the lack of awareness of the impact of this issue on them.

And while we are discussing today the Federal Government's role and the critical issues surrounding the challenges faced by the Federal Government, I'm also extremely concerned that we do not see a level of awareness in general with local units and government and businesses that will be affected.

That is certainly something I would certainly welcome anyone speaking to.

Thank you.

Mrs. MORELLA. Thank you, Ms. Stabenow.

Mr. Barcia.

Mr. BARCIA. Thank you very much, Madam Chairwoman.

I'd like to thank you and the Ranking Member for convening this session, and also the distinguished panel guests who will share their insight on this very critical problem as all my colleagues have mentioned.

And so that as the millennium is fast approaching, I'd don't think we can devote too much time and attention to this issue to be prepared for the challenges that we'll face with regard to our national computer network.

Thank you, Madam Chairwoman. In the interests of time, I won't have any further opening comment.

Mrs. MORELLA. Thank you, Mr. Barcia.

Mr. Doyle.

Talk about perfect timing, if you have any opening comments?

Mr. DOYLE. No opening comments, Madam Chairwoman. Thank you very much.

Mrs. MORELLA. Thank you, Mr. Doyle.

It is the procedure in this Committee that we swear in witnesses so might I ask if you would kindly stand.

[Witnesses sworn.]

Mrs. MORELLA. The record will show an affirmative response. Thank you.

I want to welcome our witnesses.

Sally Katzen who is the Administrator of the Office of Information and Regulatory Affairs of the Office of Management and Budget, not new to this Committee, the two Subcommittees. We thank you for the work that you've done.

And Mr. Willemssen, Joel Willemssen, the Director of Accounting and Information Management Division in the General Accounting Office.

We've looked at your testimony and look forward to hearing from you.

And in both instances, the entirety of your testimony will be in the record. And if you'd like to synopsise with highlights, we'd appreciate it.

Thank you very much.

Ms. Katzen.

**TESTIMONY OF HON. SALLY KATZEN, ADMINISTRATOR, OFFICE OF INFORMATION AND REGULATORY AFFAIRS, OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC**

Ms. KATZEN. Thank you very much.

Good morning, Madam Chairwoman, and Mr. Chairman, members of the Committee.

I am pleased to be back to continue our discussions on how the Federal Government is moving to solve the Year 2000 computer problem for our information technology systems.

And I would like, as I have in the past, to begin by again acknowledging our appreciation for the leadership that both of you and your Committees have shown in focusing attention on this problem and helping to raise awareness of the issue.

We are very appreciative of the efforts that you have undertaken in this regard.

As you mentioned, today's hearing is going to focus on the Year 2000 quarterly reports from the federal Agencies to OMB which we hope will help reassure the public that the Executive Branch is aware of and working on the Year 2000 problem, so that what we all agree would be totally unacceptable consequences of system failure as a result of that problem will not occur.

As you indicated in your opening statement, Madam Chairwoman, a lot has happened since I testified last September.

In the appropriations language that you referred to, OMB was directed to assess the risk to federal systems and submit a report on the costs and strategy for addressing that risk, which we did on February 6, 1997, in the report that you identified.

That report identified the Federal Government's strategy to address the problem, established a schedule against which to measure agency progress, and provided initial cost estimates.

As reflected in that report, a key component of our strategy is assuring agency progress and accountability by the Agencies that are charged with this responsibility.

As you also mentioned, we spent a lot of time this spring working with your staffs and with the CIO Council and its subcommittee on the Year 2000 to design a reporting requirement for the Agencies to use to measure progress that would be helpful not only to OMB but also to the Congress in its oversight capacity.

In May, we informed the Agencies that it would be a quarterly reporting requirement that would be in place on the 15th of May and then August and November.

The reporting requirements were specifically designed to provide information that would be useful for oversight while imposing the least burden practicable on the Agencies.

To be very blunt about it, it was important to spend time fixing the problem, not filing reports on what we were going to do to fix the problem, and we did not want to detract too much attention from that effort.

We are using those reports to monitor agency progress and to take action where we perceive the Agencies are not moving quickly enough.

Those reports describe how Agencies are organized to address the Year 2000 problem or to use the terms that were used in the opening statement, the management capability and responsibility of the Agencies.

The reports provide a status of their efforts to address the problem, where they are with respect to the milestones that have been established to update, if appropriate, the cost estimates that they have for addressing the problem, and to identify any mission critical systems that are falling behind schedule, so that we can focus our attention on them.

As you mentioned, the first report was sent to the Congress, a summary of it, on June 23, 1997, and I have attached a copy in my full written statement.

We also made a copy of that report available through OMB's Home Page and on the CIO Home Page so that it would be readily available to any and all with an interest in the subject.

That summary shows that most Agencies are in the assessment phase, as you have noted, that they estimate that they will now spend roughly \$2.8 billion fixing this problem.

Of the 7,649 mission-critical systems identified—and this did not include SSA because they report in modules, rather than systems—59 percent are being repaired, 9 percent are being replaced, 8 percent are being retired, and 21 percent are already Year 2000-compliant.

With respect to SSA, the figures of the modules is 71 percent as of May 15 of this year.

As you mentioned, the cost estimates that we provided, \$2.8 billion, is an increase from the figures that were provided in the February 1997 report, which, as I indicated at that time, were initial estimates that we expected to increase as the Agencies proceeded through the assessment stage and had a better handle.

While the number has increased to 2.8, I indicated in this report that we expected that number to continue to increase slightly as, again, the Agencies complete the assessment phase and handle the different responsibilities that they have.

Placing this in context, when we met here approximately a year ago, I was asked, did I think it would cost \$60 billion, which was the figure that was floating at the time? And I said, no, I thought it was closer to \$1–5 billion.

And the numbers that we see here are more in line with that range than with the other numbers that are being used. And that's just to provide some context. But the numbers are going to be changing as the Agencies do more of their work.

With respect to overall characterization of the report and what it shows, I would say that Agencies have made a good start.

Whether it was your report cards from a year ago that got their attention and woke them up, whether it was the series of meetings that we had with the senior management, whether it was headlines in newspapers that spelled out dire predictions, or all of the above, we have their attention.

No one is even talking awareness now in the Federal Government. That is assumed to have been completed.

We are in the assessment phase for many of them, and some are through the assessment phase. Even while those who are in the assessment phase are still in the assessment phase, they have begun, in many instances, the renovation stage.

You don't have to complete totally one whole phase before you go on to the next. The work occurs ad seriatim.

I also was pleased to see that no mission-critical systems have been reported behind schedule as of yet. That's something which I think is important and that we will be focusing on.

But I do not want in any way to minimize the enormous amount of hard work that remains to be done, the absolute need for us to stay on top of this, to apply the resources that are necessary to assure that the American people continue to be able to receive the benefits, services, and other aspects of the Federal Government that they should.

We continue to meet and work with senior officials in the Agencies, and when we see that their timeframe has slowed or is not accelerating as much as we would like, we have been meeting with them and working with them to solve their problems.

We continue to bring these issues to the attention of the CIO Council, and the very good work, the excellent work that is being done by the Subcommittee on Year 2000—you'll be hearing in the next panel from the Chair of the CIO Council and the Chair of that Subcommittee to talk about what they've been doing.

On a government wide basis, among other things, they do have underway, efforts to look at the facilities-based issues such as elevators and heating and air conditioning and security systems within the buildings.

They have a Subcommittee that is looking at the telecommunications systems. They have a Subcommittee that is looking at biomedical devices and laboratory equipment so that each Agency does not have to reinvent the wheel.

This is where collegial efforts can actually be very productive. And you will hear more about this from the witnesses who follow me.

I think that we have made a good start. I think we have a long way to go, and that there is a lot of work to do.

We are confident that we will finish that work, and that the Year 2000 will be a time for celebration, and that the concern with this will be largely a non-event.

I thank you again for holding these hearings. I would be happy to respond to any questions, and to continue what I think has been a very important and constructive dialogue.

[The prepared statement and attachments of Ms. Katzen follow:]



EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF MANAGEMENT AND BUDGET  
WASHINGTON, D.C. 20503

ADMINISTRATOR  
OFFICE OF  
INFORMATION AND  
REGULATORY AFFAIRS

STATEMENT OF SALLY KATZEN  
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OFFICE OF INFORMATION AND REGULATORY AFFAIRS  
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BEFORE THE  
SUBCOMMITTEE ON TECHNOLOGY  
OF THE COMMITTEE ON SCIENCE  
AND THE  
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT, INFORMATION, AND TECHNOLOGY  
OF THE COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT  
U.S. HOUSE OF REPRESENTATIVES

July 10, 1997

Good Morning. I am pleased to again appear before the Subcommittees to discuss solving the year 2000 computer problem for Federal information technology systems.

Today's hearing, which focusses on the year 2000 quarterly reports from Federal agencies to OMB, will be helpful to maintain public confidence that the Executive Branch is aware of, and working on, the year 2000 problem so that the unacceptable consequences of systems failures as a result of that problem will be avoided.

When I testified last September, we were in the midst of an active effort to raise senior managers' awareness of the year 2000 problem and convince them that it poses a real threat to the business of their agencies. Much has happened since then as the agencies have made a good start toward making their systems year 2000 compliant.

In 1997 appropriations language, the Congress directed OMB to assess the risk to Federal systems and submit a report on the cost and strategy for addressing that risk. On February 6, 1997, OMB sent a report to the Congress entitled "Getting Federal Computers Ready for 2000". That report outlined the Federal government's strategy to address the year 2000 computer problem in its systems, established the schedule against which to measure agency progress, and provided initial cost estimates. As reflected in that report, a key component of our strategy is assuring agency progress and accountability.

This Spring, we worked with your staff, the CIO Council, and its Subcommittee on Year 2000 to design a reporting requirement for measuring agency progress that could be used not only by OMB, but by the Congress as well. In May, OMB informed the agencies that they would be required to report quarterly on their year 2000

progress on the fifteenth of February, May, August, and November. (See OMB Memorandum M-97-13, "Computer Difficulties Due to the Year 2000 -- Progress Reports" - May 7, 1997).

The reporting requirements were designed to impose the least burden practicable on the agencies while satisfying OMB's oversight requirements. We will use the reports to monitor agency activities and take action where we perceive an agency's progress is too slow.

#### Reporting Requirements.

The agency reports include four sections:

Organizational Responsibilities. The first section describes how an agency is organized to track progress in addressing the Year 2000 problem. It includes identifying who is responsible, a description of the processes for assuring internal accountability of those responsible, a description of management actions taken when an organization falls behind schedule, and a description of how internal performance is verified. These responsibilities are to be included in the first report, and subsequently updated if any changes are made. We asked for this information because it is essential to assure that responsibility has been assigned appropriately if we are to succeed in addressing the problem.

Status. The second section provides a status of agency efforts to address the problem. It requires a count of the number of mission-critical systems and a count of how many of those systems will be repaired, replaced, or retired. For those being repaired, it also requires a statement of the agency's milestones for completing each phase of the best practices and a report of the percentage of the systems that have completed each phase. This section will allow us to measure the progress of an agency's overall Year 2000 program. We expect, for example, the counts of mission-critical systems completing each phase to increase from report to report.

This section also requires a brief narrative description of agency progress in addressing the problem in other than mission-critical systems and in problems beyond information technology systems, such as security systems or elevators. While our emphasis is on mission-critical systems and we ask for an accounting of them, we are also concerned about the status of other systems and any problem due to embedded technology.

Finally, this section provides an opportunity for agencies to describe any significant problems that may be hindering

their progress, including a discussion of their ability to acquire and retain skilled personnel to fix systems. This information will help to identify areas where government-wide action can assist agencies in addressing this problem. So, for example, we have established an interagency working group, chaired by the Department of Health and Human Services, to look into the potential impact of this problem on bio-medical devices and laboratory equipment.

Costs. The third section of the report provides agency estimates of the cost of addressing the problem in fiscal years 1996 through 2000. We expect these estimates to increase as agencies complete their assessment of the problem, and, based on the first report, they have. We included this requirement to identify needed funding and assure that funding constraints do not preclude agencies from fixing this problem.

Exception Reporting on Systems. In the fourth section of the report, agencies are required to report any mission-critical system being repaired or replaced that falls behind schedule by more than two months. This section will provide an early warning and focus agency senior management attention on such systems. The information to be provided includes an explanation of why the system has fallen behind schedule, what the new schedule is, and a description of funding and other resources being devoted to ameliorate the problem.

The report will also identify any mission-critical system that falls behind schedule and remains behind schedule for more than one quarterly report. For such systems, an agency is to provide a description of actions being taken to mitigate the situation and a summary of the contingency plan for performing the function supported by the system.

#### First Agency Reports.

The first agency reports were sent to OMB on May 15, 1997. These reports provide the first government-wide measures of progress in the Executive Branch. They have provided OMB with information necessary to assess the progress of the agencies and to determine which warrant special attention.

#### Summary Report.

On June 23, 1997 we sent a summary of the first quarterly reports to the Subcommittees. Because it is important to inform the public of agency progress, we have also made that summary available through OMB's home page and on the CIO home page. The summary shows that most agencies are in the assessment phase, that agencies now estimate they will spend \$2.8 billion fixing



this problem, and that of the 7,649 mission critical systems identified (excluding the Social Security Administration, which reported modules):

- o 4,493 (59%) are being repaired,
- o 673 (9%) are being replaced,
- o 621 (8%) are being retired,
- o 1,598 (21%) are already year 2000 compliant, and
- o 264 (3%) are still to be evaluated.

There were no mission-critical systems reported behind schedule.

I have attached a copy of the summary report to my statement.

While the agencies have made a good start, much work remains to be done. Only 21 percent of the government's mission-critical systems are reported as already compliant. An additional 8 percent are being retired and need not be fixed. That leaves 71 percent of the 7,649 mission-critical systems reported that must be repaired or replaced.

#### Government-wide Cost.

Our \$2.8 billion estimate of the government-wide cost is higher than the \$2.3 billion estimate that we reported in February. We had anticipated that the estimates would change and likely increase as agencies progress through their assessments of the problem. Indeed, even since the May 15 date of the reports, some departments and agencies have revised their estimates. We expect that the August quarterly reports will provide better, and likely higher, cost estimates as most agencies complete their assessments.

The estimates cover the costs of identifying necessary changes, evaluating the cost effectiveness of making those changes (fix or scrap decisions), making changes, testing systems, and preparing contingencies for failure recovery. They do not include the costs of upgrades or replacements that would otherwise occur as part of the normal systems life cycle. They also do not include the Federal share of the costs for state information systems that support Federal programs.

#### Assessment and Actions.

Agencies continue to place a high priority on fixing the year 2000 problem. I would characterize the first reports as showing that agencies have made a good start in addressing the problem. Most agencies are on schedule. They have completed or will

shortly complete their assessment of the problem, and many have begun renovating systems. No mission-critical systems were reported behind schedule. However, the bulk of the hard work still lies ahead.

We are continuing to work with senior officials in those agencies that are not scheduled to complete their assessment or renovation phases as early as most other agencies through meetings focussed on this issue or as part of more general discussions about agency information management. In particular, where plans are not complete or progress is slower than previously promised, we continue to bring the issue to the attention of senior agency management to ensure their continued involvement. In addition, we will use the information in the reports to assist in our Fall review of agency budget requests.

We are also continuing our work on ways to help address this problem from a government-wide perspective. Specifically, we have undertaken targeted efforts to address the year 2000 problem in Federal buildings, telecommunications and bio-medical devices and laboratory equipment. We work closely with the CIO Council and its Subcommittee on Year 2000. I understand that Al Pesachowitz, the Vice-chairman of the CIO Council, and Kathy Adams, the chairwoman of the Subcommittee on Year 2000, are testifying today about the excellent work they are doing. We also work closely with GSA, which provides support for government-wide activities such as maintaining the year 2000 home page for exchanging information about how to best address this problem. I understand that Joe Thompson of GSA is also testifying today. All three of them and their organizations have been extremely helpful to us in addressing this problem.

#### Conclusion

We have made a good start. While we, like the Subcommittees, are concerned about the limited time we have left, and the large amount of work that remains to be done, we are confident that we will finish that work so that the year 2000 computer problem will be a non-event -- and we will all be able to celebrate the new millennium.

I thank the Subcommittees for holding its series of hearings on this important subject. They are contributing materially to the solution of the year 2000 problem.

I would be happy to answer any questions that you may have.

**Getting Federal Computers Ready for 2000**

**Progress Report**



U.S. Office of Management and Budget

May 15, 1997

**Getting Federal Computers Ready for 2000**  
 Progress Report of the U.S. Office of Management and Budget  
 May 15, 1997

The Administration and the Congress are both working to address the year 2000 computer problem. On February 6, 1997 OMB sent a report to the Congress entitled "Getting Federal Computers Ready for 2000," which outlines the Federal government's strategy to address the year 2000 computer problem in its systems. That strategy includes assuring agency accountability. To assist in that effort, OMB required agencies to report quarterly on their program on the fifteenth of February, May, August, and November. (See OMB Memorandum M-97-13, "Computer Difficulties Due to the Year 2000 -- Progress Reports" - May 7, 1997).

This summary report is based on the first agency reports due to OMB on May 15, 1997. Those reports:

1. describe the organizational responsibilities for addressing the problem,
2. include a status of agency efforts to address the problem,
3. estimate the cost of addressing the problem in fiscal years 1996 through 2000, and
4. report on any systems that fall behind schedule.

Analysis

The February report established the schedule against which to measure progress and provided initial cost estimates. This report provides the first measures of progress and updated cost estimates. It shows that most agencies are in the assessment phase, that agencies now estimate they will spend \$2.8 billion fixing this problem, and that of the 7,649 mission critical systems identified (excluding the Social Security Administration, which reported modules):

- o 4,493 (59%) are being repaired,
- o 673 (9%) are being replaced,
- o 621 (8%) are being retired,
- o 1,598 (21%) are already year 2000 compliant, and
- o 264 (3%) are still to be evaluated.

This report includes four tables which array and summarize information provided by agencies. No systems were reported behind schedule.

Table 1, "Agency Progress and Plans for Year 2000 Compliance of Mission Critical Systems," provides the schedules for agencies to complete the phases of the government-wide best practices. It shows that 18 of the 24 agencies were still in the assessment phase as of May 15, 1997.

Table 2, "Agency Year 2000 Mission Critical Systems," provides a snapshot as of May 15, 1997 of the size of the year 2000 problem and the results of "repair, replace, or retire" decisions made thus far. Agencies have identified 7,649 mission critical systems (excluding the Social Security Administration which has identified 29,139 modules).

Table 2 also shows that agencies are planning to repair the majority (59 percent) of their systems, replace 9 percent and retire 8 percent. Twenty one (21) percent of agency mission critical systems are already Year 2000 compliant. Decisions are pending for 3 percent.

Table 3, "Status of Agency Year 2000 Mission Critical Systems Being Repaired," shows that, as a weighted percentage, the government is 65 percent complete with its assessment, and 17 percent complete with renovation of the systems to be repaired.

Table 4, "Agency Year 2000 Cost Estimates as of May 15, 1997," shows the estimated costs for fixing the problem by agency. Agencies estimated it will cost \$2.8 billion to fix the year 2000 problem. That includes an estimated expenditure of \$758 million in FY 1997 and \$1.1 billion in FY 1998.

The estimates cover the costs of identifying necessary changes, evaluating the cost effectiveness of making those changes (fix or scrap decisions), making changes, testing systems, and preparing contingencies for failure recovery. They do not include the costs of upgrades or replacements that would otherwise occur as part of the normal systems life cycle. They also do not include the Federal share of the costs for state information systems that support Federal programs. The figures provided by agencies continue to be preliminary estimates.

#### Evaluation

As the first quarterly report, this report provides the first measure of progress in the Executive Branch. Based on the reports, agencies have made a good start in addressing the year 2000 problem. Most agencies are on schedule and have completed or will shortly complete their assessment of the problem. In the interim, many have begun renovating systems. No mission critical systems are reported behind schedule.

However, as the summary tables show, much work remains to be done. As of today, 21 percent of the agency mission-critical systems are reported as already compliant. An additional 8 percent are being retired and need not be fixed. That leaves 71 percent of the 7,649 mission critical systems reported that must be repaired or replaced.

As expected, our estimate of the government-wide cost (\$2.8 billion) is higher than the \$2.3 billion estimate that we reported in February, because agencies have progressed through their assessments of the problem. Indeed, even since the May 15 date of this report, some departments and agencies have revised their estimates, such as the Internal Revenue Service. We expect that the next quarterly report will provide a better, and likely higher, cost estimate as most agencies complete their assessments in June.

#### Action

Agencies continue to place a high priority on fixing this problem. However, we are continuing to interact with senior officials in those agencies that are not scheduled to complete their assessment or renovation phases as early as most other agencies. In addition, where plans are not complete or progress is slower than previously promised, we are bringing the issue to the attention of senior agency management to ensure their continued involvement.

TABLE 1

Agency Progress and Plans for Year 2000 Compliance of Mission Critical Systems  
(May 15, 1997)

<u>Agency</u>	<u>Assessment</u>	<u>Renovation</u>	<u>Validation</u>	<u>Implementation</u>
Agriculture	6/97 <sup>1</sup>	9/98	9/99	10/99
Commerce	3/97	12/98	1/99	10/99
Defense	12/97	12/98	6/99	11/99
Education	6/97	9/98	9/98	3/99
Energy <sup>2</sup>	1/97	9/98	2/99	7/99
HHS	6/97	12/98	1/99	11/99
HUD	6/97	12/98	7/99	11/99
Interior <sup>2</sup>	3/97	12/98	1/99	11/99
Justice <sup>2</sup>	6/97	7/98	10/98	1/99
Labor	6/97	12/98	1/99	11/99
State	6/97	9/98	10/98	8/99
DOT <sup>3</sup>	12/97	12/98	12/99	12/99
Treasury	7/97	12/98	12/98	11/99
VA <sup>2</sup>	1/98	11/98	1/99	12/99
AID <sup>3</sup>	8/97	TBD	TBD	TBD
EPA	6/97	12/98	1/99	11/99
FEMA	6/97	12/98	1/99	11/99
GSA	6/97	12/98	1/99	10/99
NASA	3/97	6/99	7/99	12/99
NSF	6/97	6/98	12/98	12/99
NRC	9/97	3/99	4/99	11/99
OPM	6/97	12/98	11/99	12/99
SBA	9/96	12/98	12/98	12/98
SSA	5/96	11/98	12/98	11/99

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<sup>1</sup> Two digits are used for the year since all dates occur before the year 2000

<sup>2</sup> Dates are earlier than those reported in February 1997.

<sup>3</sup> Dates are later than those reported in February 1997.

TABLE 2

Agency Year 2000 Mission Critical Systems  
(May 15, 1997)

Agency	Total Number	Number Compliant	% of Total	Number Being Replaced	Number Being Repaired	Number Being Retired	Number Undecided
Agriculture	684	80	12%	43	469	87	5
Commerce	484	111	23%	110	162	3	98
Defense	3,962	582	15%	473 <sup>1</sup>	2,752	487	141
Education	24	10	42%	6	7	1	
Energy	261	73	28%	119	61	8	
HHS	566	251	44%	132	177	6	
HUD	206	32	16%	36	115	23	
Interior	85	35	41%	10	38	2	
Justice	190	61	32%	10	118	1	
Labor	58	6	10%	28	24	0	
State	58	12	21%	29	14	0	3
DOT <sup>2</sup>	166	18	11%	16	132	0	
Treasury	86	13	15%	7	66	0	
VA	11	1	9%	0	10	0	
AID	64	20	31%	30	2	0	12
EPA	61	28	46%	12	16	0	5
FEMA	38	17	45%	3	17	1	
GSA	42	16	38%	2	23	1	
NASA	453	205	45%	37	211	0	
NSF	16	0	-	4	12	0	
NRC <sup>3</sup>	n/a	n/a	n/a	n/a	n/a	n/a	
OPM	94	17	18%	9	67	1	
SBA	40	10	25%	30	0	0	
SSA <sup>4</sup>	29,139	20,426	71%	975	7,730	8	
Total <sup>5</sup>	7,649	1,598	21%	673	4,493	621	264

<sup>1</sup> Not included in the total systems -- entries in this figure may have been reported twice.

<sup>2</sup> Does not include FAA -- will be provided after assessment is completed.

<sup>3</sup> Information will be provided after assessment is completed.

<sup>4</sup> Reported and tracking modules (units of computer code that when compiled/assembled and executed perform a specific business function) rather than systems.

<sup>5</sup> Excludes SSA which reported modules.



TABLE 3

Status of Agency Year 2000 Mission Critical Systems Being Repaired  
(May 15, 1997)

Agency	Number of Systems	Assessment % Complete	Renovation % Complete	Validation % Complete	Implementation % Complete
Agriculture	469	41%	0%	0%	0%
Commerce	162	75%	7%	5%	5%
Defense	2,752	64%	23%	5%	8%
Education	7	30%	0%	0%	0%
Energy	61	100%	8%	8%	8%
HHS	177	99%	15%	17%	16%
HUD	115	50%	2%	0%	2%
Interior	38	90%	41%	0%	0%
Justice	118	52%	2%	1%	0%
Labor	24	86%	19%	19%	13%
State	14	71%	0%	0%	0%
DOT	132	50%	10%	0%	0%
Treasury	66	80%	17%	15%	8%
VA	10	85%	32%	12%	6%
AID	2	80%	0%	0%	0%
EPA	16	80%	20%	20%	20%
FEMA	17	92%	47%	26%	26%
GSA	23	99%	40%	5%	5%
NASA	211	75%	2%	1%	1%
NSF	12	0%	17%	0%	0%
NRC	n/a	-	-	-	-
OPM	67	100%	0%	0%	0%
SBA	0	100%	25%	25%	25%
SSA <sup>1</sup>	7,730	100%	65%	55%	50%
Total <sup>2</sup>	4,493	65%	17%	5%	6%

<sup>1</sup> Reported and tracking modules rather than systems.

<sup>2</sup> Excludes SSA which reported modules; percentages are weighted averages.

**TABLE 4**  
**AGENCY YEAR 2000 COST ESTIMATES AS OF MAY 15, 1997**  
*(Dollars in Millions, by Fiscal Year)*

Agency	1996	1997	1998	1999	2000	TOTAL
Agriculture *	3.7	22.1	37.3	27.8	6.3	97.2
Commerce *	2.6	11.3	27.3	25.1	6.6	72.9
Defense *	10.4	381.6	620.9	263.0	41.1	1317.0
Education *	0.1	0.6	3.4	4.4	0.2	8.7
Energy *	1.8	30.5	54.4	53.1	21.1	160.9
HHS	0.0	27.7	42.9	14.5	5.6	90.7
HUD	0.7	11.0	35.0	15.0	6.2	67.9
Interior *	0.2	3.4	15.0	4.3	1.8	24.7
Justice	1.5	8.0	9.8	2.9	0.3	22.5
Labor	1.7	5.3	4.6	2.2	1.5	15.2
State	0.5	47.6	56.4	29.1	1.6	135.2
Transportation *	1.8	13.8	25.6	44.1	6.6	91.9
Treasury *	1.3	106.0	102.0	119.0	41.0	369.3
VA	4.0	49.0	49.0	42.0	0.0	144.0
AID	0.0	0.2	0.5	0.3	0.0	1.0
EPA	0.8	3.3	6.8	5.6	2.3	18.8
FEMA	3.8	4.4	3.0	3.2	1.2	15.6
GSA	0.2	0.6	0.6	0.2	0.0	1.6
NASA *	0.1	8.8	19.8	13.7	2.2	44.6
NSF	0.0	0.2	0.3	0.1	0.0	0.6
NRC	N/A	2.6	2.9	2.9	0.9	9.3
OPM *	1.7	2.1	0.3	0.3	0.3	4.7
SBA	2.7	2.3	1.9	0.0	0.0	6.9
SSA	2.2	15.4	9.5	6.0	0.1	33.2
<b>TOTAL</b>	<b>41.9</b>	<b>757.8</b>	<b>1129.1</b>	<b>678.7</b>	<b>146.9</b>	<b>2754.4</b>

**Notes:**

More accurate estimates will become available as agencies complete the assessment phase. These estimates do not include the Federal share of the costs for State information systems that support Federal programs. For example, the Agriculture total does not include the potential 50 percent in Federal matching funds provided to States by Food and Consumer Services to correct their Year 2000 problems. Similarly, the HHS total does not include the Medicaid baseline costs for the Federal share of state systems. And, while Labor's FY 1998 appropriation request includes \$200 million for States to correct Year 2000 problems in State unemployment insurance systems, that amount is not included in this estimate.

N/A means "not available."

\* Agencies for which total estimate changed by more than \$1 million from the February report; as noted above, Treasury (IRS) has already indicated that there will be an increase reflected in the next report.

Biography  
of  
Sally Katzen

Sally Katzen is the Administrator, Office of Information and Regulatory Affairs in the Office of Management and Budget. She had previously served in Government in the Carter Administration as General Counsel (1979-80) and then Deputy Director for Program Policy (1980-81) of the Council on Wage and Price Stability in the Executive Office of the President.

Prior to becoming Administrator, she was a Partner in the Washington, D.C. law firm of Wilmer, Cutler & Pickering, specializing in regulatory/legislative matters. She has worked extensively in the field of administrative law, both in her law practice and in professional activities. In 1988, she was elected Chair of the Section on Administrative Law and Regulatory Practice of the American Bar Association; she has held various other offices in the ABA, including serving two terms as a D.C. Delegate to the House of Delegates. She served as a Public Member and Vice-Chairman of the Administrative Conference of the United States, and she has taught Administrative Law as an Adjunct Professor at Georgetown Law Center. In 1990 she was elected President of the Federal Communications Bar Association. She also served as President of the Women's Legal Defense Fund (1976-77), and is a member of its Advisory Board.

She was born and raised in Pittsburgh, Pennsylvania, and graduated from Smith College and the University of Michigan Law School, where she was Editor-in-Chief of the Michigan Law Review. Following graduating from law school, she clerked for Judge J. Skelly Wright of the U.S. Court of Appeals for the District of Columbia Circuit.

She is married to Timothy B. Dyk and they have one child.

Mrs. MORELLA. Thank you, Ms. Katzen. We'll have some questions following Mr. Willemssen's comments.

I'd like to just note that we have been joined on this panel by Mr. Davis from Virginia, Mr. Sununu from New Hampshire, and Ms. Johnson from Texas.

And now it's a pleasure to turn to you, Mr. Willemssen, from the GAO.

**TESTIMONY OF JOEL WILLEMSEN, DIRECTOR, ACCOUNTING AND INFORMATION MANAGEMENT DIVISION, GENERAL ACCOUNTING OFFICE, WASHINGTON, DC**

Mr. WILLEMSEN. Thank you, Madam Chairwoman, Chairman Horn, and Representative Gordon, members of the Subcommittees. Thank you for inviting GAO to testify today on the Year 2000 issue.

As requested, I'll briefly summarize our statement.

As noted, OMB recently submitted its first quarterly report on the progress of federal Agencies in correcting the Year 2000 problem. The report is based on the quarterly reports submitted by individual Departments and Agencies.

In its report, OMB acknowledged that much work remains. However, OMB also stated that it believed Agencies had made a good start in addressing the problem.

OMB went on to say that most Agencies had completed or would shortly complete the assessment phase work, but that many had begun to make fixes, and that no mission-critical systems were reported to be behind schedule.

OMB's perspective would seem to imply that there is no cause for alarm. We don't share that view.

On the contrary, we believe that OMB and federal Agencies need to increase their level of concern, and move with more urgency to clearly demonstrate that a business-as-usual approach on the Year 2000 issue won't work.

As we've pointed out in earlier testimony, if systems fail, the resulting delays and problems could be devastating. Let me highlight a few of the reasons why we believe more urgency is needed:

First, the Agencies' reported schedules show that most are leaving essentially little or no time for unanticipated schedule delays. As the chart over here shows—and I might also note that the chart is reprinted at the back of our statement for those of you who cannot see it—this shows the schedules for each of the Agencies for completion of critical phases of the Year 2000 program.

So that reading across, for any given Department or Agency, the circle that's one-quarter filled indicates estimated completion of assessment; half-filled indicates renovation; three-quarters filled estimated completion of validation, and fully-filled, implementation. The red stripe going down the middle is where we're at today.

In looking at the chart, you can see the predominance of symbols on the right side, dangerously close to the Year 2000. This leaves little time if something would require more work before January of the Year 2000.

Second, as shown on the chart, 6 of the 24 Departments and Agencies reported that they would not complete assessments of mission-critical systems by the June 1997 OMB deadline.

The current estimated costs for achieving Year 2000 compliance for those 6 is almost \$2 billion, or almost 70 percent of the total price tag as it stands now.

When assessments of mission criticality haven't been completed, it's logical to assume that the schedules for those systems haven't been finalized, and that the estimated costs will likely increase.

Our recent evaluation of Year 2000 readiness at selected Agencies show that assessment activities have not been completed. For example, at the Veterans Benefits Administration, I testified 2 weeks ago that key readiness assessment processes, including determining the potential severity of the impact of a Year 2000 failure and conducting inventories on information systems and their components, had not been completed.

I also testified in May that the Health Care Financing Administration had not completed numerous critical assessment activities for the systems run by its contractors to process approximately \$200 billion annually in Medicare claims.

Our third reason for pushing for more urgency from OMB and the Agencies is that OMB's perspective is based on Agency self-reporting. Indications exist that Agency reports may not be entirely accurate.

Fourth, Agencies may have interpreted mission-critical systems in various ways, even within Departments. For example, the Department of the Army reports that 7 percent of its total systems are mission-critical, yet the Defense Information Systems Agency reports that 100 percent of its systems are mission-critical.

Finally, beyond the major areas covered in the OMB Summary Report, other issues surrounding the Year 2000 readiness are emerging as critical ones.

These include the data interface and exchange issue that Ranking Member Gordon mentioned, the establishment of systems priorities, and contingency planning.

In closing, I'd like to reiterate that we believe that it's important that the Executive Branch place more urgency on this issue. Continuing Congressional oversight such as this hearing will be an important catalyst to make sure that occurs.

That concludes the summary of my remarks, and I'd be pleased to address any questions.

[The prepared statement and attachments of Mr. Willemssen follow:]

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**GAO**

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**United States General Accounting Office**

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**Testimony**

Before the Subcommittee on Government Management,  
Information and Technology, House Committee on  
Government Reform and Oversight, and the Subcommittee on  
Technology, House Committee on Science

For Release on Delivery  
Expected at  
10 a.m.  
Thursday,  
July 10, 1997

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**YEAR 2000  
COMPUTING CRISIS****Time Is Running Out for  
Federal Agencies to Prepare  
for the Millennium**

Statement of Joel C. Willemsen  
Director, Information Resources Management  
Accounting and Information Management Division



Mr. Chairman, Ms. Chairwoman, and Members of the Subcommittees:

During the past 12 months, the year 2000 computing problem has received increased attention—and deservedly so—in large part thanks to the efforts of your Subcommittees. Much has happened since the initial congressional hearings on this matter were held just over a year ago on whether computer systems that support federal programs will be equipped to handle dates later than 1999. At that time, most federal agencies were just beginning to be aware of the year 2000 issue and its importance, and few had prepared plans for addressing it.

Now, agencies report to the Office of Management and Budget (OMB) that they are in a much better position to resolve the year 2000 challenge before the actual change of millennium. However, while agencies have certainly made progress over the last year, we believe that the pace needs to be significantly accelerated if widespread systems problems are to be avoided as the year 2000 approaches.

Our testimony today will describe the federal government's strategy for addressing the year 2000 problem, and agencies' reported status in resolving the issue. In addition, we will provide observations on federal efforts to date based on work we have completed at certain agencies and on our review of OMB's implementation of the federal strategy, including year 2000 reports submitted by 24 federal agencies.

READINESS FOR THE YEAR 2000: THE FEDERAL STRATEGY

The federal strategy for resolving the year 2000 computing crisis is detailed in a document OMB submitted on February 6 of this year to three House Committees: Government Reform and Oversight, Science, and Appropriations. The strategy is predicated on three assumptions: (1) senior agency managers will take whatever action is necessary to address the problem once they are aware of its potential consequences; (2) a single solution to the problem does not exist, and solving it requires modification or replacement of agency information systems; and (3) given the limited amount of time available, emphasis will be placed on mission-critical systems.

At the department and agency level, this strategy relies on the recently established chief information officers, or CIOs, to direct year 2000 actions. To complement individual agency efforts, OMB is (1) requesting that departments and agencies submit quarterly reports on their progress, and (2) sharing management and technical expertise through its CIO Council and the Council's Subcommittee on the Year 2000.

In addition, OMB has set as the standard that agency year 2000 activities should adhere to industry best practices for the five delineated phases of an effective year 2000 program: *awareness, assessment, renovation, validation, and implementation*. In consonance with these phases, we have developed and disseminated an assessment guide to help



agencies plan, manage, and evaluate their year 2000 programs.<sup>1</sup> The guide provides information on the scope of the challenge and offers a structured approach for agencies to use. We are following the approach outlined in the guide for our reviews at selected agencies, and are encouraging others to use it as well. To date, we have received over 16,000 requests for copies.

For each of the five phases, OMB has set the following governmentwide milestones for agencies to complete the majority of the work.

OMB's Governmentwide Year 2000 Milestones		
Phase	Completion measure	Completion date
AWARENESS	Agency strategy approved by CIO	12/96
ASSESSMENT	Inventory and scope completed	3/97
	System plans/schedules approved by CIO	6/97
RENOVATION	Coding completed	12/98
VALIDATION	Management sign-off	1/99
IMPLEMENTATION	Integrated testing completed	11/99

Source: OMB.

<sup>1</sup>Year 2000 Computing Crisis: An Assessment Guide [exposure draft] (GAO/AIMD- 10.1.14, February 1997).

STATUS OF AGENCIES' YEAR 2000 PROGRAMS

On June 23, 1997, OMB transmitted its first quarterly report, dated May 15, 1997, to selected congressional committees on the progress of federal agencies in correcting the year 2000 problem.<sup>2</sup> This report is based on the quarterly reports submitted by the individual departments and agencies, which address questions of organizational responsibility, program status, cost, and mission-critical systems that are behind schedule.

In its report, based on May 1997 agency estimates, OMB noted that agencies expect to spend about \$2.75 billion correcting systems to be what is called year 2000 compliant. This is an increase of nearly \$500 million, or about 20 percent, over the February 1997 estimate. OMB noted in its summary report that its next quarterly report will likely provide a higher cost estimate as more agencies complete the assessment phase.

While acknowledging that much work remains, OMB--on the basis of the agency reports--expressed its belief that agencies had made a good start in addressing the problem. OMB further summarized that most agencies had completed or would shortly complete their assessments of the problem, many had begun systems renovation, and no mission-critical systems were reported to be behind schedule.

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<sup>2</sup>Getting Federal Computers Ready for 2000, Progress Report, U. S. Office of Management and Budget, May 15, 1997.

The OMB report includes agency-specific schedules for completing the assessment, renovation, validation, and implementation phases of the year 2000 effort. Our accompanying chart, which appears at the end of this statement, summarizes those schedules.

As shown on our chart, 18 of 24 departments and agencies reported that they would complete the assessment phase as of last month, the deadline in OMB's governmentwide schedule. Six reported that they would not meet the assessment phase deadline: Defense, Transportation, Treasury, Veterans Affairs, the Agency for International Development (AID), and the Nuclear Regulatory Commission (NRC). The current estimated cost for achieving year 2000 compliance for these 6 entities is about \$1.9 billion, or about 70 percent of the total for the 24 agencies.

To complete the assessment phase, an agency needs to undertake a variety of activities. In our view these should include, at a minimum, (1) assessing the severity and timing of the impact of year 2000-induced failures; (2) developing a thorough inventory of all of its systems; (3) establishing priorities and schedules as to whether--and which--systems should be converted, replaced, or eliminated; (4) developing validation strategies and test plans; (5) addressing interface and data exchange issues; and (6) developing contingency plans for critical systems in the event of failure.

Our evaluations of year 2000 readiness at component agencies of both the Department of Veterans Affairs--one of the six reporting to OMB that its assessment was still underway --and of Health and Human Services--which reported that this phase would be completed in June 1997--show that assessment activities have not yet been completed.<sup>3</sup> For example, we recently testified that key readiness assessment processes at the Veterans Benefits Administration--including determining the potential severity of impact of the year 2000 on agency operations, inventorying information systems and their components, and developing contingency plans--had not been completed. The Department has indicated that it will complete its assessment next January.<sup>4</sup>

We also reported and testified this past May that the Health Care Financing Administration (HCFA)--a major component agency within the Department of Health and Human Services (HHS)--had not completed numerous critical assessment activities for the systems run by its contractors to process approximately \$200 billion annually in Medicare claims.<sup>5</sup> Specifically, HCFA had not required systems contractors to submit

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<sup>3</sup>We currently have ongoing year 2000 evaluations at the Department of Defense, Department of State, Social Security Administration, Federal Aviation Administration, and Internal Revenue Service; in addition, we will shortly begin work at the Veterans Health Administration.

<sup>4</sup>Veterans Benefits Computer Systems: Uninterrupted Delivery of Benefits Depends on Timely Correction of Year 2000 Problems (GAO/T-AIMD-97-114, June 26, 1997) and Veterans Benefits Computer Systems: Risks of VBA's Year 2000 Efforts (GAO/AIMD-97-79, May 30, 1997).

<sup>5</sup>Medicare Transaction System: Success Depends Upon Correcting Critical Managerial and Technical Weaknesses (GAO/AIMD-97-78, May 16, 1997) and Medicare Transaction System: Serious Managerial and Technical Weaknesses Threaten Modernization (GAO/T-AIMD-97-91, May 16, 1997).

year 2000 plans for approval, and lacked contracts or other legal agreements detailing how or when the year 2000 problem would be corrected, or indeed whether contractors would even certify that they would correct the problem. We made several recommendations to HCFA to address its shortcomings in this area, including regular reporting to HHS on its progress. HHS reported in May that it expected to complete the assessment phase last month.

URGENT NEED TO ACCELERATE  
AGENCY YEAR 2000 PROGRAMS

As we have pointed out in earlier testimony, if systems that millions of Americans have come to rely on for regular benefits malfunction, the ensuing delays could be disastrous.<sup>6</sup> OMB's perspective that agencies have made a good start and that no mission-critical systems were reported to be behind schedule would seem to imply that there is no cause for alarm. On the contrary, we believe ample evidence exists that OMB and key federal agencies need to heighten their levels of concern and move with more urgency. A closer look reveals why.

First, the agencies' reported schedules show that most are leaving essentially no margin of error for unanticipated schedule delays; 15 of 24 expect to complete implementation in

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<sup>6</sup>Year 2000 Computing Crisis: Strong Leadership Today Needed To Prevent Future Disruption of Government Services (GAO/T-AIMD-97-51, Feb. 24, 1997).

either *November* or *December* of 1999. This leaves only a matter of weeks, at most, if something should require more work before January 1, 2000. According to their own reports, six agencies, including four large departments, have already missed OMB's June 1997 deadline for completion of assessment. Where assessments of mission criticality have not been completed, it is logical to assume that schedules for correcting those systems have not been made final. Given these factors, it is essential that OMB continue to monitor agency schedules to identify delays so that necessary action can be taken to enable programs to finish in time.

Second, OMB's perspective is based on agency self-reporting, which has not been independently validated. Indications are that agency reports may not be accurate; those saying that assessment has been completed include HHS which, as I have highlighted today, still has much to do.

Third, entities may have interpreted *mission-critical* in various ways—even within departments. For example, the Department of the Army reports that 7 percent of its systems are mission-critical, yet the Defense Information Systems Agency, a Defense Department support agency, considers all of its systems—100 percent—to be mission-critical. A further look within Defense shows that almost two-thirds of over 2,750 "mission-critical" systems slated for repair are still in the assessment phase. And this excludes over 11,000 lower priority systems that are in varying stages of assessment.

Fourth, OMB, in its governmentwide schedule, has established only 1 month—from December 1998 to January 1999—to complete validation. The validation phase is critical for thorough testing of all converted or replaced system components to (1) uncover any errors introduced during conversion or renovation, (2) validate year 2000 compliance, and (3) verify operational readiness. Without adequate testing, agencies can have no assurance that their solutions will actually work. According to the Gartner Group, a private research firm acknowledged for its expertise in year 2000 issues, activities such as unit and system testing could consume up to 40 percent of the time and resources dedicated to an entire year 2000 program. OMB's timeline does not convey this message. Accordingly, agencies may perceive that OMB does not view testing and validation activities as especially critical, and that OMB may approve overly optimistic schedules.

OTHER CRITICAL READINESS ISSUES THAT  
DEMAND HIGH-PRIORITY ATTENTION

Beyond the major areas covered in agency reports to OMB and, in turn, in OMB's report to Committees of the Congress, other issues surrounding year 2000 readiness are quickly emerging that will be of major importance as agencies move farther along in their year 2000 programs. These include data interfaces and exchanges, systems prioritization, and contingency planning. Our recent reports on year 2000 programs at the Veterans

Benefits Administration and the Health Care Financing Administration include several recommendations to address these issues.

Data exchange. Many agencies exchange data with hundreds if not thousands of external entities. Unless both parties to any exchange are year 2000 compliant, information systems and databases may easily be contaminated by coding embedded in noncompliant systems. To combat this, agencies must inventory and assess all internal and external data exchanges, make appropriate notifications and, if necessary, develop appropriate bridges or filters to maintain the integrity of replaced or converted systems and the data within them.

Systems prioritization. It is becoming increasingly clear that agencies will likely be unable to correct all noncompliant systems before 2000. Accordingly, it is imperative that agencies set priorities, on the basis of mission needs and the timing and expected impact of year 2000-induced failures. Identification of mission-critical systems is not enough; each department's and agency's most important business activities must be given top priority to ensure their continued, uninterrupted operation.

Contingency planning. Because the cost of systems failure--in terms beyond just the monetary--can be very high, contingency plans must be prepared so that core business functions will continue to be performed even if systems have not been made year 2000 compliant.



We consider it essential that OMB emphasize in its ongoing oversight and monitoring these issues that we expect to grow in significance in the next 2½ years.

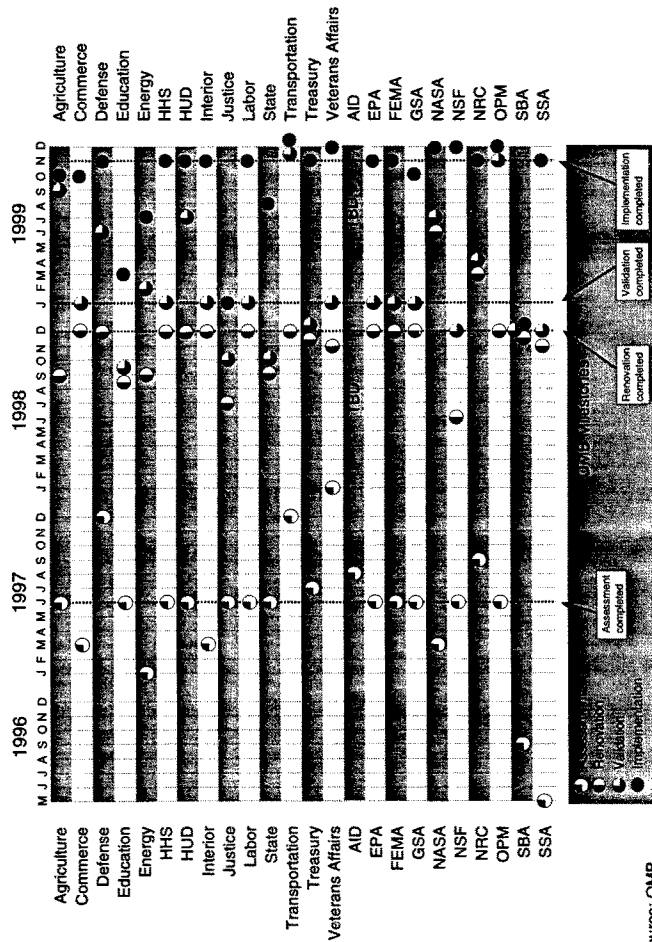
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In closing, as we have reiterated previously, preparing for the year 2000 is much more of a management challenge than a technical one. Managers--in the agencies and in OMB--must ensure that the technical solutions are implemented on time. It *can* be done, and the public is depending on us to do it. Continuing congressional oversight, such as this hearing, will be an important catalyst to effective, timely actions to ensure that information systems are prepared for the year 2000.

Mr. Chairman, Ms. Chairwoman, and Members of the Subcommittees, this concludes my statement. I would be pleased to respond to any questions you may have at this time.

(511225)

# GAO Agency Progress and Plans for Year-2000 Compliance of Mission-Critical Systems



Joel C. Willemssen

Mr. Willemssen is Director of Information Resources Management within GAO's Accounting and Information Management Division. In this position, he is responsible for GAO's reviews of information technology management at many of the federal government's major departments and agencies, including the Departments of Agriculture, Education, Energy, Health and Human Services, HUD, Interior, Labor, Transportation, Veterans Affairs, and EPA and SSA.

Mr. Willemssen joined GAO in 1979 and since that time has participated in and led numerous computer systems reviews in a wide array of federal agencies. His evaluation experience is predominantly in assessing major modernization efforts, telecommunications, software management, performance evaluation, requirements management, acquisition approaches, systems maintenance, and business process reengineering.

Mr. Willemssen has received many awards throughout his career, including GAO's Meritorious Service Award. He received a bachelors and a masters degree in business administration from the University of Iowa, and completed the executive level program in information systems at UCLA.

Mrs. MORELLA. Thank you very much for your statement. I'm now going to allow Chairman Horn to have the first opportunity for questioning.

Mr. HORN. Thank you very much, Madam Chairwoman.

Ms. Katzen, in my opening remarks, I noted the need for the President to use the bully pulpit to awaken not only the Executive Branch for which he's responsible, but generally across the land, for which The Gartner Group, in testimony before our Committee in April of 1996, that it's a \$300 billion problem.

That's certainly worthy of Presidential attention. Have you or the Director of OMB recommended to the President that he speak out in this area in a radio address or by other means of communication?

He's the most skilled person since Franklin Roosevelt in the Presidency, and it would be very helpful.

Ms. KATZEN. We have from time to time thought through and made recommendations about the best way of focusing attention on this issue.

Our approach to date has been to speak to the managers of the Departments and the Agencies, as you know.

Mr. HORN. I take it that the answer to the question is no; you have not recommended to the President that he speak out?

Ms. KATZEN. That is correct.

Mr. HORN. Let's move to reprogramming policy. My understanding with the Director was that, generally, they would urge Departments to reprogram existing money in their budget in order to get right on top of this problem now and not sit around in a 1-year budget process or more than 1 year.

As we all know, there's three cycles going on. What is OMB's policy on the sense of urgency here of using reprogram money rather than having people come up and say, gee, I need \$258 million for the Year 2000 solution, as IRS did recently?

What's our policy on this?

Ms. KATZEN. In most instances, the annual appropriations for information technology are sufficient to be available to use these monies without reprogramming technically done.

And we have encouraged that. We have explained that with a roughly \$26-27 billion a year annual appropriations for information technology, the money for this particular problem is there, and it is the most important.

When we have had the budget reviews with the Agencies last fall, there were a number where the issue specifically was focused on because of our concern, and it was made clear that this was the number one priority in the information technology area.

A few Agencies did, in fact, request additional money, and those were part of the President's Balanced Budget Proposal. They included that request for funding where we thought additional funds taken from the Departments would be appropriate.

Mr. HORN. How much money at this point do we know has been reprogrammed to deal with this problem in the current fiscal year?

Ms. KATZEN. I don't have the figures in that order because a lot of it doesn't have to be reprogrammed. A lot of it is there to be used for information technology and would be used in the ordinary course.

Much of the repair work that has to be done here can be done during ordinary operating and maintenance of the systems for which there is a substantial amount of funds available.

And we don't ask the Agencies, nor do they keep track of, penny-by-penny, how they use their money within a particular line item. And if there is no need to reprogram, then to give any figure of the amount of money that would be transferred would, I think, be very misleading in terms of the amount of attention devoted and resources spent in fixing the problem.

Mr. HORN. Well, but money is a problem. And I realize it buys resources, and I'm not asking that question.

I'm just making sure that there's flexibility in the system where money can be reprogrammed.

Ms. KATZEN. There is.

Mr. HORN. And if there isn't—well, you're taking it from IT money, right?

Can you go beyond that?

Ms. KATZEN. Yes.

Mr. HORN. Well, good. So you have the exiting authority from the Appropriations Subcommittees?

Ms. KATZEN. It will depend, with respect to—there's no single answer with respect to the appropriations that apply to each of the Departments and Agencies.

Our approach has been from the beginning, that there is sufficient money there, and if there is not, we will either request additional money, which, I guess, technically, would be reprogramming, because it would be coming from some other source within the Appropriation Subcommittees' general jurisdiction—

Our hope is that we would not have to use program funds for this, and to date have not had to. But that still enables sufficient money to be used.

We see, rather than the dollars, that the challenge here is on management.

Mr. HORN. I couldn't agree with you more.

Ms. KATZEN. And attention, and to focus that attention has been our primary objective.

Mr. HORN. I commend OMB, if that's their policy. I think you're absolutely right. The problem is management, and you need to use the resources you have if you possibly can.

So, I gather from the answer to the question that you feel you have sufficient authority from the Congress in order to deal with the use of resources at the right place at the right time.

And if you don't, you're going to ask us for it?

Ms. KATZEN. Absolutely.

Mr. HORN. Okay, that's fine with me. What is our timing on questions on this fine Joint Subcommittee?

It's what, 5 minutes?

Well, I'd like to yield the rest of my time to Mr. Sununu.

Mr. SUNUNU. Thank you, Mr. Chairman. If I can just take a couple of moments to talk a little bit more about the contingency planning, as was mentioned in Mr. Willemssen's presentation.

There are a number of Agencies that show their timetable for completion of implementation as December of 1999. I'm struck by that, coming out of an engineering background.

I've worked fairly frequently on projects that involve extensive planning efforts, specification efforts, validation efforts, and implementation.

The fact of the matter is, it is always a challenge, no matter how large or small the project, to meet original timetables that have been set.

My question is, what contingency plans do we have for those Agencies that show their completion date as the month, if not the day or the week before we reach a point of crisis? What are our contingency plans?

How do we ensure that those that have scheduled completion for December 1999, actually meet that very tight time schedule?

Ms. KATZEN. Well, I think that's a very important question.

I agree with you that there is little time available, which is why, according to the schedule, which is why as we meet with the Agencies, we urge them to accelerate their timing.

In the report that we filed, the May 15 report that was filed in June, there were three or four Departments which had a footnote call after their name to show that they had accelerated the time periods from what had previously been reported.

This is on Table 1, Energy, Interior, Justice, VA, that have taken what was earlier timeframes and accelerated them. That is the result of our focusing on the fact that there is not a great deal of time there.

If we had more time, I would be happy, but we don't, and so the issue of how one plans for the contingency that you raised is, I think, the right question.

The only other caveat that I would mention is that the closed circle, or the completed circle or the final date given is the final date for all mission-critical systems within an entire Department.

So, I would hope that there would be some understanding that within some of the particularly large holding company Departments, as I sometimes refer to them, they may have several bureaus, several departments, some of which may be well ahead of the others.

It is the last possible date that is reflected on there, so it may be a single system that is in trouble. Now, when we see that—and we see that date—we inquire as to what is driving the final number, and the need for a contingency plan is first and foremost.

In some instances, that may come about as a result of a previous intention to replace a system which is beginning to slip, and, therefore, we need a contingency plan to fix the ones that previously we thought had been replaced.

In some instances, it's shifting some of the resources from a particular system to another. GAO testified about the VA program.

In fact, they're looking to do some data consolidation, and the particular data center that they're looking at is very much farther along than any of the others.

That's a type of contingency plan where they could then shift to a different data center that was by then, Year 2000-compliant.

It will differ for the different Departments and Agencies. The issue for us is, are they at a point where they must have a contingency plan developed, and are they going about and doing that planning?

And that's the question that we are pursuing with them.

Mr. SUNUNU. When you're talking about a contingency plan for ensuring that implementation is completed by December 31, 1999, or a contingency plan for the continuing of their Agency operations if or when they fail to update all the mission-critical systems?

Ms. KATZEN. A contingency plan would be if they do not meet the deadline of December 31, 1999.

Our efforts are to accelerate. I wouldn't call that a contingency; I would call that additional pressure and attention on the issue to do everything we can to make sure they don't back up against those dates.

Mr. SUNUNU. Have all Agencies been requested to prepare contingency plans for the event that a mission-critical system isn't in compliance by the Year 2000?

Ms. KATZEN. I would not say that all have. Where we are identifying mission-critical systems that are looking as they are close to the line, the issue becomes real.

In those instances where they have already fixed the system and have tested it and verified it, as 21 percent government wide are already Year 2000-compliant, there's no reason to have a contingency plan for those systems.

So it has to be on a system-by-system basis on these that we're pursuing.

Mr. SUNUNU. Thank you.

I would only emphasize that I think that should be an important part of this entire planning process, is identifying as early as possible, those mission-critical systems that are at risk, and ensure that the planning not just consider, well, how do we accelerate the timetable, but how do we plan for the contingency that the mission-critical systems aren't prepared.

Ms. KATZEN. I agree completely with that.

Mr. SUNUNU. I know it's not in your jurisdiction, but I would wonder if you or Mr. Willemssen could comment on the international implications a bit?

We've talked somewhat about the mission-critical systems that we have here in the United States, and that's obviously a principal focus.

And we have numbers that give us a feeling, the 7,000 or so mission-critical systems that are affected in our own Agency structure.

Would you talk about the number of systems and the nature of the systems, globally, that will be affected in a similar manner, specifically those that might have an impact on U.S. citizens, aviation systems, air traffic control, financial systems, that may also be at risk outside our borders?

Mr. WILLEMSSEN. Despite our pessimism about where the Federal Government is at, and OMB's actions to date, the general perception is that the international community is far behind the United States in addressing the Year 2000 issue.

We have not done any specific work on that. I give you that view, based on literature that we've looked at. The general perception is that this country is further ahead than the rest of the international community.

The impact could be felt, though, obviously, within this country, to the extent that we have data interchanges and exchanges with other countries' systems.

If their data is not Year 2000-compliant, our systems here have to make sure that we have the appropriate bridges or filters so that non-compliant does not infiltrate our systems.

Mr. SUNUNU. Where are those kinds of interchanges most common?

Mr. WILLEMSSEN. Again, we have not done work on this. I would guess that there might be something in the financial area. That would be the banking area which is probably an area to explore further.

Ms. KATZEN. Financial institutions, U.S. multinational corporations will have a variety of these types.

I would concur with my colleague from GAO on the assessment that the United States is far ahead of the rest of the world on this issue, and that is not a basis for pride or complacency, but for continued attention to this issue.

One of the subcommittees of the Year 2000 Committee for the CIO Council, which is looking at data standards will at some point be able to use those efforts internationally, as well, where they are accepted.

Mrs. MORELLA. I'll pick up the questioning then, too.

I wanted to get back to something that I've always felt was needed, and Chairman Horn mentioned it, too.

I'm not sure about whether there was an adequate answer with regard to the position of the President as the leader, to make a definite statement, whether at a press conference, a particular broadcast, calling the Cabinet in, and then announcing that he's called the Cabinet in.

He calls the press in after that. In terms of leadership, what do you think that we should do, you should do, with regard to having a strong statement made by the head of state?

Ms. Katzen, I'll ask you, and, Mr. Willemssen, if you want to add something in terms of how you look at that, too, what can be done. I think a definite statement has to be made.

Maybe if you want an Executive Order, that might not be a bad idea.

Ms. KATZEN. I think that it is obviously very beneficial to have a statement made, to use the bully pulpit. I think it is also, as I tried to indicate in my opening comments, important to get the work done.

We have attempted to get the attention of, and focus that attention of those within the Departments and Agencies who are doing the work and need the support to get the work done.

Within almost all of the Departments and Agencies, there is what is known as sort of the Chief Operating Officer, usually the Deputy Secretary or the Undersecretary, that is responsible for the management of that Department or Agency.

They meet together once a month. I have appeared before that group on several occasions to talk about this issue. And we have actually arranged to have some people from the private sector come and talk to them, not on the technical side, but on the management side.



What kinds of questions should you be asking your people to make sure that you're getting the right answers? So that's one area that we're working on.

The other area is the CIO Council, and you'll hear from the co-Chair of the CIO Council. We have had monthly meetings for almost a year now.

I have attended virtually all of those. I cannot think of a meeting where we did not spend some time talking about the Year 2000 problem with the CIOs, who, under the Clinger-Cohen Act that you mentioned in your opening statement, ultimately are the persons responsible within the Department or Agency for assuring that this will be done.

In terms of the public awareness—and I take it as a fact that some small businesses have yet to realize the importance of this—but I must say, having seen some articles in the newspaper and in the general media, including magazines where there are worst-case scenarios, that are quite explicit, if not based in fact, on the very worst case that could possibly happen, on newsstands around the country, I'm not sure what would exactly get their attention.

The objective here, I believe, is to have the work proceed. And we are always open and always considering other ways of heightening the attention that is being given.

Mrs. MORELLA. Will you ask the President to do something? We will.

[Laughter.]

Mrs. MORELLA. You've evaded the question, but actually, I do know that you do bring it up every week at the meetings. I've heard that from others.

So I can validate the fact that it is always a topic of discussion, and how are you doing? Are you achieving the milestones, etc.

Ms. KATZEN. I will carry the message.

Mrs. MORELLA. That will be great. We'll also try to follow through, too.

Mr. Willemsen, do you want to comment on this?

Mr. WILLEMSSEN. Yes.

There's no doubt that information technology professionals, Chief Information Officers, and other professionals in the computer and telecom field recognize the priority of this issue and that it must be fixed.

I have a lot of doubts as to whether officials at the Secretary, Deputy Secretary level and Program Managers still believe this is a really high priority. I think that's the message that has to be carried out.

There's no doubt that the CIO Council has made this a major priority. No one would dispute that.

But at the program level, we've got to do more.

Ms. KATZEN. I would have to say, in response to that, if I may, that I know of several Cabinet Secretaries who have spoken to this issue. It is on their agenda for their senior staff meetings.

I know almost every Deputy Secretary is fully aware of the importance of this issue and the status. One of the things that we have in the quarterly report is a requirement that it be signed by the CIO of the Agency, and/or the Deputy Secretary, so that this has their attention.

I just feel that while I'm perfectly prepared to say that more has to be done, and I'm perfectly prepared to say we have to focus more, I do not think it is accurate to say that Secretaries, Deputy Secretaries and Agency heads are not aware of this issue.

I really feel compelled to say that.

Mr. WILLEMSSEN. I wouldn't say that on the awareness. I'm talking in terms of the priority and the priority demonstrated through various actions, budget resources and otherwise.

Ms. KATZEN. Again, I disagree.

Mrs. MORELLA. Because you've worked so hard on it.

Ms. KATZEN. Not only I, the Director of OMB, as well, and others have devoted time and effort.

But more importantly, we're seeing the results. We are seeing that some Departments and Agencies are accelerating their timeframes.

Some Departments and Agencies are clearly reporting increase in mission-critical systems being repaired. When I speak on this issue, eyes don't glaze over and they go into some sort of sense of denial, which did happen 18 months ago.

It can't be that difficult. Computers are smart, we won't have that problem. I don't hear any of that.

I hear, okay, I'll triple my efforts within the Department if that's what it takes. I hear a commitment to address this issue.

Mrs. MORELLA. I'd like to also ask if you would ask Frank Raines to speak to the President. I think that would help.

Again—

Ms. KATZEN. Absolutely.

Mrs. MORELLA. Thank you.

I just had a lot of questions that came up also because of Mr. Willemsen's kind of confirmation of some of the ideas.

For instance, the \$2.8 billion dollar figure, in his testimony he mentions that six Agencies have not completed their assessment. It will ultimately cost them 70 percent of \$2.8 billion; that's 6 out of 24.

So it indicates that there will not be just a small amount that will have to be added to the budget figure, but a significant amount will have to be added if that is 70 percent.

Ms. KATZEN. The issue here, though, is whether everybody is holding back, and I don't think that's the case.

In other words, the fact that a Department has not completed its assessment, does not mean that it does not have a better handle on the number. And it may be, in not having yet completed it, it may be 80 percent of the way there; it may be 90 percent of the way there.

And in the process of getting and revising its figures as it goes, so that, for example, as reflected in the report, we know that since May 15th, the Internal Revenue Service has revised its numbers, has increased its numbers.

Treasury is shown as not having completed the full assessment, but they have done enough to know that they need additional funds. So it's not an on/off switch until you are completely finished with the assessment. You don't have any idea of what the real costs are.

It's how far along you are in the process. Again, as I mentioned to Mr. Sununu, what these figures are for when the assessment is finished or when the renovation is, is when the very last thing is done.

But along the way you have a lot of information that is useful.

Mrs. MORELLA. It just shows that we're not tied to that figure; that it is going to escalate, and we know it will, bit-by-bit.

Ms. KATZEN. I said I thought it would increase as it has been increasing as we get better information through the process.

Mrs. MORELLA. I'd like to also point out that as I looked at the chart, with assessment, renovation, validation, and implementation, as I mentioned in my opening comments, I just found some very unusual dates here.

For instance, DOT has a validation date of 12/99, and an implementation date of 12/99. I find that pretty remarkable.

Ms. KATZEN. I found it a cause of concern and actually met with them last week. That is a problem, and we are going to address that.

That's why we get this information, so we see where we can focus attention. And we did meet on this subject, specifically, last week.

Mrs. MORELLA. You have a number of others that are very, very similar areas, for instance, OPM, 11/99 for validation and 12/99 for implementation, and even some others that have given themselves like 3 months or 4 months.

From what I understand from experts, you need—we used to say you needed a year and now maybe 9 months. Maybe you could do it in that period.

I find it difficult to understand that you could do it much later. So what I'm saying is, if that is reflective of the self-reporting or self-accounting, as Mr. Willemsen says, then maybe we need to have more reality in it.

Then I have another question: Do we need to have a so-called Year 2000 Czar? Do we need somebody who is going to be like in charge of this?

You've got CIOs in each of the Agencies, and then you meet with them. Do we need to have one?

Ms. KATZEN. The concept of the Clinger-Cohen Act is that information technology is best managed most effectively, most efficiently, on a decentralized basis with the Agencies themselves and the Departments themselves being held accountable for their activities.

This is not an area, in particular with the Year 2000 issue, where a silver bullet or a dose of medicine administered at a centralized point is going to solve the problem.

There is real work to be done. It's work that has to be done at the Department, at the Agencies, at the technical level where the expertise is to be applied, and where the support must come from within the Program Offices, from within the Office of the Secretary of the Department.

We believe that by ensuring the importance of this, stressing the importance of this issue, then making it very clear that we are holding the Agencies accountable for their progress, that we will have a more efficient and effective way.

We also believe that there is a role for these, in effect, coordinating committees. What Kathy Adams has done with the Subcommittee of the Year 2000 in setting up the various subcommittees, saves a lot of the Agencies time and effort from having to reinvent the wheel themselves.

If we have one group looking at elevators and sharing the results of what happens with the embedded chips in the elevators, we're all head of the game in that regard.

So, I think there are different functions that can be served by different levels and different groups. Now, does it need one Czar?

As if there were sufficient power available——

Mrs. MORELLA. I'm thinking of accountability.

Ms. KATZEN. OMB has served that role. It does it both in terms of its ordinary statutory responsibilities in the area of information technology, generally, and through the budget process.

Each year, we review the Agency's performance and the Agency's plans in the context of the appropriation of the President's budget.

We also have management reviews and other components that fit into that process. And that's where this is currently.

Mrs. MORELLA. Let me ask you just one more question, so I can give my colleagues an opportunity. Then I hope to ultimately get back to asking questions later, too.

We want to send a strong message to the information technology community that their products also have to be Year 2000-compliant. And to achieve it, we are now working on statutory language for this year's appropriations bill—Treasury and Postal would be the ones—that would prohibit the Federal Government from purchasing any information technology which is not Year 2000-compliant pursuant to Part 39[106] of the Federal Acquisitions Regulations.

We feel that by forcing the government vendors to sell only Year 2000-compliant information technology by law, that it would increase the probability that those manufacturers, as well as others, might speed up the commercialization of Year 2000-compliant products for all Americans.

I wonder what your reaction is, both of you, to this, and would you support such statutory language?

Ms. KATZEN. I would agree, in principle, with that concept. We have been working towards that objective within the CIO Council.

Again, I think either Kathy Adams or Mr. Pesachowitz on the next panel will be able to give you more information.

But we have worked on contract language that would require vendors to certify that their products are Year 2000-compliant. We've worked on putting together a database so that Agencies will know what information technology is, in fact, Year 2000-compliant.

And exchange of information among the Agencies, as they discover subtleties or not-so-subtleties—so I think we join you completely in that objective.

We have been doing it as a matter of policy, and I have full agreement in principle to do it as a matter of law.

Mrs. MORELLA. Very good.

Mr. Willemssen?

Mr. WILLEMSEN. I concur with the gist of Sally's comments. I think, in general, the concept is very sound and makes sense.

I think the CIO Subcommittee has done some good work in this area. And now it's a matter of implementing it and getting it done.

Mrs. MORELLA. Thank you. We've also been joined here at the Subcommittee's meeting by Mr. McHale from Pennsylvania, and Mr. Bartlett from Maryland.

I'm now going to recognize Mr. Gordon for questioning.

Mr. GORDON. Thank you, Madam Chairwoman.

I also want to concur that many of us are looking at this legislation to require that the Federal Government purchase products that are Year 2000-compliant, not only for the benefit of the taxpayers, but also as a model for trying to push the private sector into making these available to the public.

So I hope that we will be successful, legislatively, but I hope that you will also move forward administratively on this. I think it's important.

Let me also say that I suspect that if we were to stick our heads in half of the offices or hearing rooms in this building today, there would probably be a discussion about an urgent issue with a critical deadline.

I say that not to minimize. This is very serious and it's very important.

It shouldn't be a game of gotcha. Ms. Katzen, I appreciate your commitment that you've demonstrated here today. A lot of it is, yes, I did; no, I didn't.

But as the quarterly reports come forward, that is your opportunity to really show that something is getting done. Again, it's not an effort to try to play gotcha.

I would suggest that you move forward as you are. I hope that you will ask us for help where we can be of help. This needs to be a partnership. This is a serious matter.

We're all going to be impacted if it's not.

Let me also maybe move, not to make the problem any bigger, but I want to try. We've talked a little bit about the problems with interfacing.

So, if in the Federal Government we get all of our information together, so what happens when we interface with the state and local and the private sector?

Let's assume that we finally get as a Nation, our act together, whatever criticisms we might have of ourselves, I think if we were to look internationally, we would find that we're way ahead. I think the British Government has at least tried to make an effort to put their private sector on notice, but what's going to be the impact?

I'd ask from both of panelists, what, in your opinion, is going to be the impact of international electronic commerce, as well as just our activities here, if we do get our act together, and we're interfacing with other Agencies and other countries around the world who have not?

What's going to be the impact of that?

Ms. KATZEN. I agree with your assessment that whatever the state of the domestic readiness, we're well ahead of our colleagues overseas, and that there will be very real implications.

Part of the solution may well be that as we are able to develop better management techniques and better technical solutions to this issue, we'll be able to share them.

One of the Committees that Kathy Adams has within her task force deals with data standardizations that will enable us to ensure that we are able to better communicate within this country.

A lot of that can be used by others overseas so as to minimize those issues.

But there has been again, as occurred here over the last several years, a growing awareness in Europe, Asia, and elsewhere, of the need to focus on these issues.

It's a problem to some extent with the old established computers and sort of mainframe type systems.

We have our fair share of those.

But it is not to minimize that work needs to be done internationally.

Mr. GORDON. Just because, I don't mean to be discourteous, but I've got a limitation of time and I want to explore this a little bit further.

I'm working with Ira Magaziner and Secretary Daley on a task force with international electronic commerce. What spillover do you see to this effort and is there, or should there be an international agency or effort?

The Chair mentioned a czar. I'm not sure we want to have an international czar but do we need to be working through some kind of international agency and is there anything like this going on now?

Ms. KATZEN. I think the seeds of this are beginning to be sown, and I think part of Mr. Magaziner's work with Secretary Daley, and they are traveling, even as we speak, carrying the message abroad, these types of issues, because we do not need another non-tariff barrier to international electronic commerce.

Mr. GORDON. Is there a vehicle for this?

Ms. KATZEN. There are various forms in which it can be developed that we are currently exploring.

Mr. GORDON. Let me ask you this, because this is somewhat maybe off out on the side.

You do not necessarily have to have all the answers now.

Would you get back to me, please, with some suggestion as to, on an international basis, what we should be doing and the impact that it can have on our country and on our government if we don't.

And if you think that there are some existing Agencies, whether it's U.N., I don't know what it might be, that would be a greater vehicle to do this?

Ms. KATZEN. I'd be happy to do that.

Mr. GORDON. If I still have a couple of minutes, I don't know whether I do or not.

But, Mr. Willemssen, on that particular question, would you add anything?

Mr. WILLEMSEN. I would echo Sally's comments, but would also add to the extent that especially federal Agencies but also some of the institutions that we've talked about within this country have clear interface and data exchanges with the international community.

It's imperative that those be identified quickly so that to the extent that there is impact, at least it try to be minimized within this country.

Mr. GORDON. Is GAO doing anything on this?

Mr. WILLEMSSEN. GAO has not done anything on the international side, no.

Mr. GORDON. Is that appropriate?

Mr. WILLEMSSEN. To the extent that we receive a request to do so, we could do that, yes.

Mr. GORDON. There's still room on the plate, then?

[Laughter.]

Mr. WILLEMSSEN. We do our best.

[Laughter.]

Mr. GORDON. You'll be hearing from me.

Thank you.

Mrs. MORELLA. Thank you, Mr. Gordon.

I'm now going to recognize Mr. Davis from Virginia, and then Mr. Davis from Illinois.

Mr. DAVIS of Virginia. Ms. Katzen, are you aware of the FASB rules and regulations allowing companies, this is private commercial companies, on the Year 2000, having to take all of their allowances in one year and not being able to conduct it over a series of years?

Ms. KATZEN. I have heard the term FASB, and I'm aware of the procedures. I am not an expert in any way, shape, or form on the actual provisions of how.

Mr. DAVIS of Virginia. Since you're the federal rep, I'll call it to your attention.

What is happening is that private companies who are having to make these changes in 1 year, 1 or 2 years, are not allowed to amortize these over a series of years, so they take the deductions in one year.

That of course is a tax liability to companies and to local and federal governments in terms of how it's going to impact the budget.

It's come to our attention and there is some concern about that.

I don't know what the best way to deal with it, but the private companies are putting a huge investment, as you know, in becoming 2000 compliant.

And it looks to me like the Federal Accounting Standards Board, at least in this case, is probably not helping with the situation at least in terms of the bottom line on how it's going to affect tax revenues and allow the companies to do this in a way that you would other capital projects.

Ms. KATZEN. I'd be happy to look into that.

Mr. DAVIS of Virginia. I note that the OMB's Federal Government Year 2000 cost estimate jumped in the June report by over 20 percent from the one that was sent last February.

Many large Agencies are still in the assessment phase, so we still don't know the size of the problem being faced.

I'd like just to go through some questions, if I can, about the cost estimates and how they were arrived at.

Is it true that the estimates for specific Agencies that have not yet completed their assessment phase, are they likely to rise in the future?

Ms. KATZEN. I think that, yes.

Mr. DAVIS of Virginia. To the extent that they haven't been completed, they may indeed rise?

Ms. KATZEN. Some of them have already risen as they've gone from 50 percent assessment to 75 percent assessment. That may have yielded additional information so that some of the increase has already been reflected in the increase that you mentioned has taken place.

I suspect that there'll be some increases even after everyone has finished their assessment as potentially unanticipated problems may arise.

Our objective is to get a fair and accurate count as we go, and I don't want to have a counter-incentive. Don't raise your figures because questions will be raised. I'd rather have the real—

Mr. DAVIS of Virginia. So would we. That's critical.

Ms. KATZEN. I think that they may continue to change. Some may go up, some may go down. I suspect most of them will go up even after the assessment phase is finished.

Mr. DAVIS of Virginia. One of the problems we're encountering out in our area is just the shortage of qualified workers bringing back the old Cobol program which we've kind of laid out to pasture. Now these guys are commanding top dollar and that is jumping the anticipated costs just in terms of the labor intensity of this.

I'm not sure how that's factored into the report. Maybe you could tell me, but the labor costs seem to have jumped on this. This in some cases can be very labor intensive.

Ms. KATZEN. It is labor intensive. Expertise is one of the critical restraints.

Mr. DAVIS of Virginia. Let me just put it in perspective. You could give us one cost in February about the amount of time and hours and work that were done. Then you take a look at it today, and as you get toward that phase to hire the workers, you find that gee, these people cost more today or tomorrow than they did 6 months ago, a year ago, when we were figuring this.

I just wondered if that's factored into it?

Ms. KATZEN. I think part of that is factored in, although some of the departments and Agencies already have contractors and contract provisions that will govern the provision of this work.

In addition, a lot of this is able to be done in-house by the staffs that would otherwise be charged with the regular operating and maintenance of the systems. And those are government employees who will be able to do that as part of their ordinary work.

Mr. DAVIS of Virginia. Now let me just take that. When you talk about federal employees doing this work in-house, does your cost include the in-house costs? Because if the employees are doing that, then they're not doing something else that they might have done.

Would that be added to the—how is that factored in?

Ms. KATZEN. We asked the Agencies to give us the cost information where there was, in addition to the ordinary work that was being done.

For example, if you have a system which you expect to come on line and replace your existing system, and therefore you're not going to repair your existing system, and your new system is going to be completed well in advance, there'd be no additional cost.

If, however, you found out that new replacement system was slipping and you wanted to accelerate its coming on line, and you



therefore increased resources to get that system on line, that would be a cost.

So this is designed to get the incremental, if you will, additional costs.

Mr. DAVIS of Virginia. That's fine.

When you look at the OMB cost estimates, does it include all the extensive Year 2000 work that's being performed under previously existing maintenance and support contracts which were previously budgeted for, or is this just the increase over and above what had been previously budgeted for over the last couple of years?

Ms. KATZEN. This would include that which is attributable solely to—

Mr. DAVIS of Virginia. Whether previous or whatever, not just new stuff coming in?

Ms. KATZEN. That's correct.

Mr. DAVIS of Virginia. One of the concerns we have out in the IT community, I represent northern Virginia, is if these cost estimates are not accurate, that as the pressure to get the job comes, and there's no additional money because nobody's requested it, and we haven't had time to weigh it the authorization and appropriation process here that existing IT procurements in other areas are going to be cut back and the money will be shifted into Year 2000, and of course that has an impact on a lot of contractors and a lot of employees out there.

Ms. KATZEN. That is a very realistic appraisal of the situation, because it is our view that rather than upgrading a system, one has to make sure it is fundamentally working, and so we want the funds, as Chairman Horn was speaking earlier during his series of questions, we'd want the money to be spent fixing the problem.

And if it means taking it from other IT projects or even going beyond the IT budget from the other programs, we need to make sure the work is done. So that is, I believe, a very realistic appraisal of the situation.

Mr. DAVIS of Virginia. Let me ask this.

Is OMB's cost estimate include the potential costs associated with the embedded chip problem that exists in some non-information technology programs, such as weapons and equipment?

Ms. KATZEN. The figures we have given are for the information technology systems, and would not include the embedded chips in the weapons systems or in elevators.

Mr. DAVIS of Virginia. Does anybody have those numbers or is anybody looking at that?

Ms. KATZEN. I believe the Agencies are actually beginning to look at that, because part of the reporting form that we had generated was designed to talk about issues that go beyond information technology and we were beginning to hear back, as I mentioned to Mrs. Morella, we are looking at biomedical and laboratory equipment, which is a very real issue for some of the health-based Agencies.

Mr. DAVIS of Virginia. I just think the Committee would be interested in what the order of magnitude is on those kind of things as well and the schedules and how that's being looked at too.

I take it the OMB cost estimate that we're seeing includes the full cost of working being performed on the non-mission critical systems as well?

Ms. KATZEN. Yes.

Mr. DAVIS of Virginia. All the different priorities from the highest to the lowest.

I also note that a few weeks ago, the Deputy Secretary of Treasury requested an additional \$258 million for the Year 2000 for the IRS at a Senate Appropriations Subcommittee hearing.

That was in addition to the \$84 million Treasury had already requested for the Year 2000.

Was the latest request reflected in the latest OMB estimate? Was that additional amount reflected, do you remember?

Ms. KATZEN. Part of it was and part of it was not since that number has changed as we were going through.

It was reflected in a footnote of the report that IRS had specifically changed its estimate since the May 15 as of date for the report. And I believe there's a footnote that singles out IRS in that regard.

Mr. DAVIS of Virginia. My last question.

In reading your comments today, I just found this. We are confident that we will finish the work so that the Year 2000 computer problem will be a non-event and we will all be able, obviously that's the goal. Realistically, do you think it's going to be a non-event?

Ms. KATZEN. Yes.

Mr. DAVIS of Virginia. You have to approach this more cautiously than that, don't you?

Ms. KATZEN. I am cautious, I am concerned. I am prepared to do what is necessary to fulfill, but that is my expectation that the requisite resources and attention will be devoted and we will all breathe a very happy sigh of relief on December 31, 1999.

Mr. DAVIS of Virginia. That is all of our hope and expectation, but using the word confident, in light of everything else we're hearing, that's an amazing optimism, and I certainly hope you're right.

Thank you.

Mrs. MORELLA. Twenty-nine months.

Mr. Davis, I'm delighted to recognize you, sir.

Mr. Danny DAVIS. Thank you very much. I'm always pleased to follow my cousin from Virginia.

[Laughter.]

Mr. DAVIS of Illinois. I'm sure that we share many of the same concerns.

Ms. Katzen, let me go to you first. From Mr. Willemsen's testimony, as well as what we've heard from many of my colleagues, there seems to be a tremendous amount of concern that we may very well not be ready by the Year 2000.

From the progress reports that you've received so far, what is the rate of computers being made 2000 compliant on a per-quarter basis?

Ms. KATZEN. We only have one-quarter's data so I can't give you a rate of increased change, but my sense is that it will be accelerating as we move along, because we're learning a lot of the lessons. It's one reason I was somewhat reactive to Mr. Horn's comment that SSA started in 1989 and they've only gone 50 percent of the way. That's 8 years.

How is the rest of the government going to catch up?

Aside from the fact that it's actually 71 percent, we've learned a lot from past lessons. And I believe the rate of repairs and renovations will increase. It's a belief that I cannot yet document because we only have one quarter's data so far.

Mr. DAVIS of Illinois. But you believe that based upon what you've been able to do initially, working out whatever bugs might exist, getting the system started, getting things on line, you are then confident that by the Year 2000, we'll be in good shape.

I mean, is that what I'm hearing?

Ms. KATZEN. Yes, sir.

Mr. DAVIS of Illinois. All right.

We know that GAO has found, for example, that HCFA had not made some critical assessments.

Do you know if those have now been made or if HCFA is moving along satisfactorily towards making those assessments so that they'll be in a better position to be on line?

Ms. KATZEN. I can answer that better in 2 weeks' time because we're meeting with them next week on this specific issue which was called to our attention, and which we have sought to verify.

Mr. DAVIS of Illinois. Okay.

Mr. Willemsen, we've had a lot of spotlight on HHS and on the VA. We've talked about those being two Agencies that we had some grave concerns about.

Are there other Agencies that you are aware of that fall in the same category?

Mr. WILLEMSSEN. We are conducting work at several other Agencies. Our work right now is on-going. It would be a bit premature for me to comment on that at this point. We do have other work at the Department of Defense, FAA, SSA, IRS, and the Department of State. But that work is on-going, so I'm really not in a position to comment yet at this time.

Mr. DAVIS of Illinois. There has also been a great deal of conversation about the President taking the leadership. You know, I heard earlier that of course he was the most effective presidential communicator since Franklin Delano Roosevelt. I always thought that Ronald Reagan did all right too.

But aside from the President taking the lead in terms of using his position to push the urgency of the matter, are there other things that perhaps could be done that will help give the American public assurance that we're really moving to be ready by 2000?

Mr. WILLEMSSEN. Among the things that we would look for are the resulting actions coming from some of the discussions that Sally has had with top agency officials. Clearly, those discussions are occurring.

We'll be looking to see what changes are made in their programs as a result of those discussions.

Are they going to speed up assessment and renovation to allow themselves additional time for testing?

Those are important items that we'd like to see come to fruition as the discussions occur.

Similarly, as the upcoming budget cycle comes up, we would hope to see that OMB imposes itself and clearly lays out some priorities linked to the Year 2000 issue.

Mr. DAVIS of Illinois. Ms. Katzen, you responded to concerns that have been expressed about a number of the Agencies having timetables that press the moment. That is, November and December. And therefore, there's very little, practically no room for error.

And you indicated that you've met with those Agencies and there have been discussions and there is indeed need to have contingency plans in place.

Would it also make sense to lay out for them some definitive tables that were a little different than what they've been able to come up with, and then give some firm and definitive projections of what they really need to do?

Ms. KATZEN. We originally set out to set forth government wide milestones and timetables and thought about imposing it by fiat or edict and say, this will happen.

Our experience is that we're usually a little bit more successful in achieving our underlying objective if we actually find out whether it's realistic or is acceptable, or whether it will be laughed at or disregarded when it is presented to them.

So we took our proposal to the CIO Council to talk about whether this makes sense, and we got some feedback. Those have been helpful in giving us a sense of what the Agencies are really dealing with.

It has not dissuaded us from the importance of continuing to press hard and firm to ensure that Agencies and departments are moving as quickly as possible.

And as we see these kinds of dates, we do step up the pressure to ensure that they're doing absolutely everything that they can.

Mr. DAVIS of Illinois. Do you agree with the GAO that this is more of a management problem than a technical problem?

Ms. KATZEN. Yes. Apart from the headlines, I think what GAO is saying and what I'm saying is remarkably similar. We're both acknowledging that there's a lot of work to be done and a lot of concern out there.

The question is really more the tone, but I believe it is a management issue that must be focused on.

Mr. DAVIS of Illinois. My final question, Mr. Willemssen.

You indicate that it is becoming just crystal clear that the Agencies are not going to be able to correct non-compliant systems before 2000. That is all.

Have you heard anything or are you hearing anything that might cause you to take a different position relative to that?

Mr. WILLEMSEN. No, I have not. I still remain concerned that it's highly likely that some systems will fail. That's why we're pushing hard on establishing priorities so that whatever failures do occur when we hit the millennium; that they occur on low priority systems that will not have a major mission impact.

Mr. DAVIS of Illinois. Thank you both very much, and thank you, Madam Chairwoman.

Mrs. MORELLA. Thank you, Mr. Davis.

I'm now going to recognize Mr. Bartlett, but I wanted to comment on the fact that being with us for some times have been Mr. Sessions, as well as Mr. Gutknecht.

Mr. Bartlett?

Mr. BARTLETT. Thank you very much.

A year ago, when Congress reviewed the Federal Government Year 2000 computer readiness, my understanding is that Representative Horn gave a letter grade of F to the Department of Transportation.

The Acting Chief Information Officer told us in February that the first he'd heard of the Year 2000 problem was last August. That was 4 months after our Subcommittee's, after this Subcommittee's first hearing on the issue and 4 months after the Subcommittee's Ranking Member, Representative Maloney and Chairman Horn sent a very detailed letter to Secretary Pena asking questions on the status of the Department's Year 2000 effort.

Interestingly, within the Department of Transportation, the Federal Highway Administration began its Year 2000 activity in April of 1989.

Why did not someone at the Department of Transportation report up the chain of command, hey, we might have a problem here that the Federal Aviation Administration should take a look at?

After all, report after report has criticized the Federal Aviation Administration's air traffic control modernization.

Why did it take the Federal Aviation Administration so long to get started?

Ms. KATZEN. I can't give you—I assume you're asking me. I can't give you an answer of what happens within the Department of Transportation.

What I can tell you is that Michael Herta, who is the CIO who testified, did not personally know of this before August of last year. He has spent an enormous amount of time on the subject since.

Mr. BARTLETT. The Chief Information Officer at the Department of Transportation told the Subcommittee in February that the assessment at FAA would be finished this May.

According to the Department's report to OMB, the Department's assessment will not be complete until the end of the year.

In fact, we still do not know the extent of the problem the Air Traffic Control system faces.

Given the difficulties that the FAA has faced in the past, very significant challenges could exist.

What specific actions is OMB taking to address the lagging response by the Department of Transportation?

Ms. KATZEN. I'd like to note that in Table 1, we identify DOT as the only department whose dates had slipped rather than accelerated since the last report.

And, having seen that, I met with them just last week. And the Deputy Secretary, Mr. Downey, among others, was with us at the time.

And we have talked about a variety of different things that can be done to not only focus attention but to get the work done at DOT.

Mr. BARTLETT. Is it not true that at this time, we really do not know, we can only hope that the Air Traffic Control system will operate safely on Saturday, January 1, 2000?

Ms. KATZEN. Following my meeting last week with Mr. Downey and others, it is my expectation that it will work on January 1, Year 2000.

Mr. BARTLETT. It's our hope that it will work, then.

We live in a world of interconnected computer networks. I have two questions relative to that.

The first question is, to what extent do the fixes in the various systems have to be coherent so that they can still network?

And the second question is, I think that it's realistic to assume that some systems are not going to be fixed by the Year 2000.

What will that do to networking, and if you are on a system that has been fixed and you're trying to network with a system that is not, will that to some degree incapacitate what your system can do?

Mr. WILLEMSSEN. To the extent that data exchanges occur beyond the particular network, the LAN or the WAN that an agency has responsibility for, there is a high degree of concern that agency address those data interfaces and data exchanges so that the information coming from other networks or other systems does not infiltrate the agency's own system and corrupt their data.

So that is a major issue and one that needs continuing attention.

Mr. BARTLETT. Thank you very much. I have no further questions at this time, Madam Chairwoman.

Mrs. MORELLA. Did you make your reservations for the around-the-world trip on January 1, 2000? I have a good discount for you.

[Laughter.]

Mr. BARTLETT. You have a good discount? Thank you.

[Laughter.]

Mrs. MORELLA. I'd like to recognize Ms. Stabenow.

Ms. STABENOW. Thank you, Madam Chairwoman.

Obviously, we're all extremely concerned as you are about what happens when the clock turns on January 1, 2000.

Could you talk a little bit more about any other contingency possibilities?

You've talked about prioritizing in terms of systems. A thought flashed through my mind as you were talking that maybe we do 1999 again.

But short of that, what other options in terms of contingency plans are possible?

Mr. WILLEMSSEN. You have to look at it from an individual agency basis.

And the work we've done, for example, at the Veteran's Benefits and Health Care Financing, we made specific recommendations to develop contingency plans now, rather than waiting for 1999. It may indeed be too late at that point.

Such plans, again highly dependent on the particular mission, but could be a combination of manual and automated processes. It's particularly important to protect existing data that we already have retained in database management systems, regardless of the applications that are being used.

So that I think has got to be a major aspect of any contingency plans. But we are pushing for those plans to begin development of those now for especially high urgency, high critical missions.

Ms. STABENOW. So at this point you're looking at protecting information, making sure we don't lose information and then looking at backup systems that might involve using more personnel as opposed to electronic or computer systems?

Mr. WILLEMSSEN. As a possibility. But to the extent that we wait on development of those contingency plans, the prospect of additional manual intervention is higher.

If we start thinking about contingency plans now, we may be able to, in the event something happens, rely more on efficient, less costly automated means.

Ms. STABENOW. I would agree, given the enormous task that confronts all of you, all of us, when we look at some of the dates for completion as being November or December of 1999, without well-thought-out contingency plans, it seems to me that we're placing ourselves in a very risky situation.

Thank you.

Mrs. MORELLA. I would agree.

Mr. SESSIONS. I'd be delighted to recognize you, sir.

Mr. SESSIONS. Thank you so much.

I appreciate the opportunity to be here today.

And Ms. Katzen, I perhaps missed some of your testimony up front, so if I'm covering some things that you've already done, feel free to tell me go read my notes a little bit more carefully of the transcript.

I'd like to, if I could, spend just a minute. We've talked about this grading system of the effort that is going on in Agencies.

Are you aware of those grades?

Ms. KATZEN. Yes.

Mr. SESSIONS. Can you please comment to me on the applicability of that? What did it mean to those Agencies. And then give me the higher, meaning maybe the As, whose making good progress, and then the Fs, if you're aware of this, how you would grade those Agencies today.

Ms. KATZEN. My original reaction to the grades that Chairman Horn assigned last spring or summer was probably the result of my being a type A personality. And a relatively compulsive and a grade getter in school.

But there's nothing like a quiz coming back in early September to focus your attention and make sure you begin good study habits to do better.

Mr. SESSIONS. Good. You took it the way he meant it then?

Ms. KATZEN. Yes, yes. And what I thought, and what I told Chairman Horn at the time was congratulations, you got their attention. And have made a lot of them much more conscious, not only of the problem, but of their need to perform.

And we use those grades in all of my meetings with the Deputy Secretaries or Under Secretaries to focus their efforts in this regard.

Mr. SESSIONS. So I gather that was concurrence that you were giving to Chairman Horn's report?

Ms. KATZEN. Well, there were some interesting aspects of individual grades. There was one department that got an F because it had not sent in a form. They actually have done a lot of work. It's energy, and they are one of the ones that's higher up in the list in terms of their dates and the amount of work that they've done and other such things, but they had not sent in a response. And that's not commendable under any circumstances, it's not excusable. But it didn't mean—

Mr. SESSIONS. It wasn't indicative necessarily of what—

Ms. KATZEN. Exactly, exactly.

Mr. SESSIONS. So you would say that Energy, upon your evaluation and your testimony today, is Energy probably would have been and now should be higher up the list in terms of a grade?

Ms. KATZEN. Yes.

We have attached to our report four tables. The fourth is the cost, the first three tables provide the milestones, the number of mission critical systems and their state of renovation and repair.

And you'll see that not surprisingly, the experience of the various Agencies is quite varied. And in some instances, they may be doing very well, and that same agency may have a less than sterling record.

It's sort of hard to capture it all in a single grade, so we've tried to provide more information to enable you to decide how you would like to evaluate them.

What we use this information for is to spot areas where we need to focus attention.

And Mrs. Morella focused us, identified a couple of different departments, GAO has identified a couple of different departments and Agencies, and this information gives us the tools to go back to them and say, not only what's happening to you, but also a little peer pressure always helps.

Look at how some of your sister Agencies are faring, and why aren't you doing better.

Again, you're hearing from someone who is basically competitive and compulsive in this area

Mr. SESSIONS. You're the straight A student of the bunch?

Ms. KATZEN. Well, I was in my youth.

Mr. SESSIONS. Would that be how you would apply that?

Ms. KATZEN. When I was in school.

Mr. SESSIONS. I like that.

Ms. KATZEN. I'm not sure what grades I'm getting now.

Mr. SESSIONS. I like that.

Mr. HORN. Before she appeared before a Congressional committee, right?

Ms. KATZEN. I was doing great.

Mr. SESSIONS. I think you're doing wonderfully.

Let's talk about then those areas, and I am looking at what I take is table 3 and table 4 and I've already admitted I did not apply myself, as you do, to everything ahead of time.

But where are those areas, since this is a management problem, are there Agencies that you believe, being very polite, that are not as far along as you might have wished they might be?

Ms. KATZEN. Yes.

Mr. SESSIONS. Since these are your charts and I haven't studied them, I'm going to let you draw some conclusions.

Ms. KATZEN. If you start with table 1.

Mr. SESSIONS. Table 1, okay.

Ms. KATZEN. Footnote 2 shows those departments that are reporting earlier dates than they had previously reported. I would consider that good and progress. Whether it's sufficient for some of them remains to be seen.



Footnote 3 is attached to the Department of Transportation which we've previously identified where their dates are further in the future than originally.

And has been pointed out, with a validation date of 12/99 and an implementation date of 12/99, there's not a lot of margin for error.

There are several others that have either 11/99 or 12/99. VA is one of those. NSF is another. NASA is another. Where they have dates that are pressing the limits.

Mr. SESSIONS. So implementation might be a burn in date?

Ms. KATZEN. That would be cause for concern and cause for me to call the appropriate people, make sure I'm getting the attention.

And one of the things that I would just mention is when I first made my series of telephone calls after Mr. Horn had provided this incentive, through the grading system, some of the calls were returned promptly, others were not.

When I said what I wanted to talk about and could we set meetings, some of them said a couple weeks from now.

Now when I call and I say what I'm calling about, I get an immediate response and an immediate meeting.

I mean, I think the attention is there.

Mr. SESSIONS. So in your opinion, in your opinion in the testimony that you're giving is that at this point, there is no organization or agency that does not or has not begun, gotten the word, gotten the message that we heard earlier.

In other words, across these Agencies, in your opinion, they get the message and they've started the plan. And you feel confident that since this is a managerial problem, that they're on board?

Ms. KATZEN. That's correct.

But I would be the first to say, a lot of them have a long way to go.

Mr. SESSIONS. Okay.

Now, when we say that, can you pick two or three of those without picking on anybody that has the furthest to go that would aid us the next time we speak with you to know whether that progress has been made?

In other words, I'd like for you not to walk out of here with us knowing what's on your plate of people who you're working with, and then I'd like to find out in the coming months what progress is being made.

Ms. KATZEN. Well, I think I've already identified the Department of Transportation is one that we met with last week. HHS which actually has done a lot and in some respects is very far along, but there are other problems that have been identified I'll be meeting with next week.

OPM is one that we're arranging meetings with.

NRC is another one that we are arranging meetings with.

And VA, I've been exchanging telephone calls with the Secretary Designate. He returned the call quickly, I just wasn't there.

Mr. SESSIONS. Okay. So you might say that these five Agencies are five at this point that you feel like you are going to work more closely with and carefully with.

Ms. KATZEN. Let me add AID to that list, as well, as one that's on our schedule for the next several weeks. And the fact that I'm

meeting with these does not mean that they have a sordid record and that they have clearly flunked the course.

Mr. SESSIONS. I don't take it that way.

Ms. KATZEN. And the fact that I didn't mention somebody doesn't mean that they're sterling and I have no cause of concern.

Mr. SESSIONS. Right.

Ms. KATZEN. This is where my attention is currently being focused.

Mr. SESSIONS. Good.

Ms. KATZEN. Based on this information.

Mr. SESSIONS. Good, good.

Inspector generals, IGs in these Agencies, I think perform a very important role.

Are these one of the avenues that you would utilize in your management structure to try and make sure that performance and information and work is being performed?

Ms. KATZEN. Yes. There is the PCIE, the President's Committee on Integrity and Efficiency, which is the IG group. And we have met with them.

They have reported back and provided information about the extent to which IGs within different departments and Agencies will not only be focused on this issue but help validate some of the information that is being supplied.

I think that's very important.

In many instances, some of the mission critical systems are financial systems for the departments themselves. The IG obviously have a very important role to play there.

But across the board, they can be very useful and have indicated their willingness to work with us in this regard.

Mr. SESSIONS. Good.

Lastly, if I have just 1 more minute, please?

Okay, thank you.

I am hoping and assume that as part of your managerial struggle with these Agencies and departments that they have gone through and listed things that would be critical elements where they could have failure, not just general code, but things that could really go bad.

And I would be interested, as we go forward, to find out what those are on an agency by agency basis. Not that we have to get into it, but that they have developed those lists and in fact are managing themselves, and I hope that that's something that has been developed.

And that's just a statement.

Ms. KATZEN. That's very important information, yes.

Mr. SESSIONS. Thank you. I appreciate this opportunity.

Mrs. MORELLA. Thank you, Mr. Sessions.

We've been joined by Ms. Maloney who is the Ranking Member of the Subcommittee on Government Management, Information and Technology, but she's going to defer to Mr. Gutknecht who's been here for awhile.

Mr. GUTKNECHT. Thank you, Madam Chairwoman.

Actually, Mr. Sessions raised a number of the points that I wanted to discuss, and I was very pleased with the answers. In fact, I'm extremely happy to hear that you are grading people and I do like

the word, words like accountability and responsibility I think are important.

And I say that, and I don't want to be overly critical of this whole effort, but earlier this week, this Subcommittee took a tour of the new terminal at Washington National Airport.

And I think we all came away from that tour feeling as if they're building a whole new nice package out there but when we saw the radar screens, which I think were built in 1956, that have been just taken out of the old control tower and put into this control tower, I think we all came away thinking, gee whiz, we've been told, this Subcommittee has been told, since I've been on it that, yes, the FAA is making progress and everything is moving ahead, it's not going the way we'd like.

And those displays that they were using over there were built when I was in kindergarten, and so I guess the first question I have for you is, at the end of the day, who ultimately is responsible and accountable for making certain that these problems are, (a) resolved, or (b) mitigated?

Is it you?

Ms. KATZEN. I would say that the Secretary of Transportation bears that responsibility for Department activity.

I am responsible, if you will, for impressing upon him that this is real, that this is a problem, and that he will be responsible for it.

But most of the activities of the Federal Government, the secretaries of the department are ultimately the ones who are to be held accountable if we are going to have an effective and efficient government.

Mr. GUTKNECHT. Don't you feel that there ought to be one person who is responsible for this?

If you say secretaries, all of a sudden, I can't name all the secretaries and neither can anybody else. Well, I shouldn't say nobody.

Ms. KATZEN. My reaction to it is that having the accountability and the responsibility at a level that is close enough to where the work is being done is generally more effective than several levels removed.

I am from OMB and that gives me a certain amount of authority within the government and people do return my telephone calls on this and other issues.

But if what we're focusing on is fixing the mission critical systems for a department, it is ultimately the secretary of that department who is to be held accountable for what the department does here as in other areas, whether it's the budgeting, the carrying out of the missions themselves, and that is the person to whom the President looks to be responsible for that department.

In some instances, you would want to devolve responsibility below that level, again, to get it closer to where the work is being done. But you need it at a high enough level within the Department to assure that those doing the work have the necessary support.

So I think it's a balancing effort.

Mr. GUTKNECHT. A balancing effort though is sometimes confused with bureaucratic shuffles. People start saying, well, it's real-

ly not my responsibility. It's OMB. And OMB says well, it's these guys.

That's what I'm concerned about, that we wind up in that problem and the result is we wind up where we are, in some respects, with the FAA, where everybody keeps saying, well, yes, we're working on it, it's going to get done.

I'll leave that. That's an unresolved issue.

But I think within the Administration, they should consider making certain that one person, perhaps it's you, is ultimately responsible and accountable to make certain that this gets done.

And I like the fact that you're grading, and I like what you're doing. I feel better about the direction that you're going than I do perhaps with some of the other Agencies that we've dealt with.

I want to change subjects real quickly, though.

This came up at our March hearing, and I understand, Ms. Katzen, that you are an attorney. One of the witnesses discussed the Year 2000 problem and the likelihood that it may trigger a liability lawsuit binge.

In fact, I think they used the term, it may create a cottage industry.

Would you care to comment on the likelihood of that and what you see as the potential legal liability as it relates to the Federal Government?

Ms. KATZEN. I have a degree, I am a lawyer. I graduated from law school. I am in a policy position now where I have the luxury of having extraordinarily good legal counsel for myself, and have for the last 4 years served in that capacity.

So I have not spent the time that I would ordinarily spend before I opined on a subject such as that. I have read in the trade press the concern. I know that this is sometimes viewed as a very highly litigious country and that virtually every issue ends up at least someone trying to go to court, whether or not our judicial system is the best place to resolve that.

And I have no doubt that there will be a substantial number of people racing to the courthouse steps to file suits of various sorts. Beyond that, how valid their cases will be, the basis of the claims, and the likelihood of success, I could not now comment on.

Mr. GUTKNECHT. Thank you, Madam Chairwoman. I've more than exhausted my 5 minutes.

Mrs. Maloney, do you have any comments?

Mrs. MALONEY. In the interest of time, I know that this panel has been speaking or addressing us for more than 2 hours. I'd like to have my opening comments placed in the record.

I would just like to really congratulate OMB on the progress you have made since our last hearing. This, I'm sure, will be one of many oversight hearings, and we'll continue looking over your shoulder and making sure that we are ready to address this problem.

Thank you.

Mrs. MORELLA. Hearing no objection, of course, your opening remarks will, in their totality, be included in the record.

[The prepared statement of Hon. Carolyn B. Maloney follows:]

PREPARED STATEMENT OF HON. CAROLYN B. MALONEY, A REPRESENTATIVE IN  
CONGRESS FROM THE STATE OF NEW YORK

GOVERNMENT MANAGEMENT SUBCOMMITTEE HEARING ON SOLVING THE YEAR 2000  
COMPUTER PROBLEM

Thank you, Mr. Chairman. The public has awakened to this issue since we first raised it last April. I hope that through this hearing, we can continue the process of bringing this problem to the attention of the American people.

When we surveyed the Agencies last spring, I was distressed to learn that over half of the Agencies we surveyed are only beginning to address this problem. Since that hearing there has been substantial progress, but there is a long way to go.

The General Accounting Office has put together a useful assessment guide, and I look forward to hearing more about how it is being used by Agencies. We have begun to receive quarterly reports from the Agencies. That, too, is helpful in monitoring the progress, and is the approach called for in the legislation I introduced.

There is still an overriding concern about whether the appropriate level of management oversight and resources are being directed to this problem. We cannot afford a failure in this conversion. That is why GAO placed the Year 2000 on the high-risk list, and that is why we are having this hearing today.

Through hearings like this, both the public and those toiling in the bureaucracy are made aware of the importance of solving this problem. This hearing will give us an opportunity to once again examine the level of effort being made.

I am cautiously optimistic that come January 1, 2000, we will have solved the problem in all critical areas. I have faith in the public servants charged with this task, and in this administration to provide the resources necessary to get the job done.

Mrs. MORELLA. I also want to thank this panel. We have held you much longer than we anticipated. It's because you are so involved in the visceral part of this whole 2000 computer conversion.

Thank you very much. We may have some more questions to pose to you, if we may do that, from any member of either of the Subcommittees.

Ms. KATZEN. Thank you for your leadership in this area. It's very important.

Mrs. MORELLA. I'm going to ask the next panel to come forward, if they would. Mr. Pesachowitz, Ms. Adams, and Mr. Thompson.

Again, it's the tradition of these Subcommittees to ask our panelists if they would please stand to be sworn in.

[Witnesses sworn en banc.]

Mrs. MORELLA. The report will indicate affirmative responses.

Very good. Mr. Pesachowitz is Vice Chair, Chief Information Officers Council, Chief Information Officer, Environmental Protection Agency. Ms. Adams is the Chair, Interagency Year 2000 Subcommittee of the Chief Information Officers Council, Assistant Deputy to Commissioner for Systems, Social Security Administration in Baltimore, who started on this in 1989. Mr. Joe Thompson is the Chief Information Officer for the General Services Administration.

Thank you all for being so patient, and for being here. As I mentioned to the other panelists, the totality of your testimony will be included in the record, and you may want to synopsize. Thank you.

We'll start off with you, Mr. Pesachowitz.

**TESTIMONY OF ALVIN PESACHOWITZ, VICE CHAIR, CHIEF INFORMATION OFFICERS COUNCIL, CHIEF INFORMATION OFFICER, ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC**

Mr. PESACHOWITZ. Thank you very much, and good afternoon, Chairpersons Morella, and Horn, and members of the respective Subcommittees. I've already been introduced.

I am the CIO of the Environmental Protection Agency, but I'm primarily here as the Vice Chair of the CIO Council.

The Council was created by Executive Order on July 16, 1996, to serve as the principal forum for improving information management practices of federal Agencies. The Council membership is composed of the CIOs and Deputy CIOs of 28 of the largest federal Agencies, as well as two representatives of other smaller and independent Agencies.

The CIO Council provides a valuable forum for CIOs to share information on critical information technology issues and challenges facing all federal Agencies today.

In addition, because the Council represents a broad cross section of the federal IT community, it is uniquely positioned to provide leadership and policy advice on cross-cutting IT issues.

This leadership takes various forms, including a collegial approach to assisting OMB in formulating government wide IT policy, and a Council strategy of establishing permanent committees to do in-depth policy work on IT issues.

At the very first meeting of the CIO Council, which was held only last October, the Council identified the Year 2000 as one of the five top priority federal CIO issues. And in November, it asked Ms. Kathy Adams to chair the CIO Council Subcommittee on the Year 2000.

To support the work of the Year 2000 Committee, the full CIO Council receives a monthly status report from the Chairperson, and has acted on several occasions to endorse Committee recommendations for action and assistance.

As I indicated earlier, the Council seeks to support cross-cutting policy issues by taking various specific management actions.

Specifically, in June, the CIO Council agreed to fund the operation and maintenance of a new database designed and developed by the Year 2000 Committee. This database will provide the federal IT community with access to high quality data on commercial products that claim to be Year 2000-compliant.

The CIO Council is strongly endorsing the use of this database as the single most authoritative source for Year 2000 product information in the Federal Government.

The CIO Council believes strongly that an effective reporting system is critical to OMB's ability to monitor government wide progress in addressing the Year 2000 problem, and to inform Congress of that progress.

The CIO Council has worked with OMB over the last 6 months in developing such a reporting system that was talked about earlier today. The Year 2000 problem is a shared problem, and the CIO Council is becoming an effective vehicle for addressing this shared problem.

I believe the joint efforts of OMB and the Council to establish an effective Year 2000 reporting system has had a positive impact on the pace of the Federal Government's response to this problem, and its ability to manage the problem effectively.

That concludes my remarks on the CIO Council's role on support for resolving the Federal Government Year 2000 problem, and I look forward to answering your questions.

[The prepared statement and attachments of Mr. Pesachowitz follow:]

**TESTIMONY OF  
ALVIN M. PESACHOWITZ  
CHIEF INFORMATION OFFICER FOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**AND**

**VICE-CHAIRMAN OF THE  
FEDERAL CHIEF INFORMATION OFFICERS COUNCIL  
BEFORE THE**

**SUBCOMMITTEE ON TECHNOLOGY  
COMMITTEE ON SCIENCE**

**AND**

**SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,  
INFORMATION, AND TECHNOLOGY  
COMMITTEE ON GOVERNMENT REFORM AND OVERSIGHT**

**U.S. HOUSE OF REPRESENTATIVES  
JULY 10, 1997**

**I. Introduction**

Good morning, Chairpersons Morella and Horn, and Members of the respective Subcommittees. I am Alvin M. Pesachowitz, Chief Information Officer (CIO) for the U.S. Environmental Protection Agency. I am also the current Vice-Chair for the Federal Chief Information Officers (CIO) Council. I am pleased to be here today on behalf of the Federal Chief Information Officers Council — or Federal CIO Council — to testify on the critical issue of the federal government's Year 2000 computer problem.

Before I discuss the role of the Federal CIO Council on the Year 2000 problem, let me first assure the members of both Subcommittees here today, the CIO Council believes that there is no



higher priority for federal CIOs than to ensure the proper operation of the information systems the government relies on to serve the American public, as we enter the next century.

The Federal CIO Council was created by Executive Order on July 16, 1997 to serve as the principal forum for improving the information management practices of federal agencies. The Council membership is composed of the CIOs and Deputy CIOs of the twenty-eight largest federal agencies, as well as, two CIOs representing other smaller and independent federal agencies. The Council is Chaired by the Deputy Director for Management of OMB. The Vice-Chair is elected by the CIO Council on a rotating basis and must be an agency CIO. (My term as Vice-Chair began in October, 1996 and will continue through November of this year.)

The CIO Council provides a valuable forum for federal CIOs to share information on the critical information technology (IT) issues and challenges facing all federal agencies today. The vision of the Administration in establishing the CIO Council was to create an executive-level body that could advise OMB on the strategic direction of information technology (IT) management in the federal government. As such, the CIO Council has an important role in assessing the government's progress in addressing critical IT management issues, such as the Year 2000. In addition, because the Council represents a broad cross-section of the federal IT community, it is uniquely positioned to provide leadership and policy advice on cross-cutting IT issues. This leadership takes various forms, including

- a collegial approach to assisting OMB in formulating government-wide IT policies, and
- a Council strategy of establishing permanent committees to do in-depth policy work on

the IT issues of vital and strategic importance to the federal government.

The Year 2000 problem is an example of one of the vital and strategic issues the Council is concerned with. Finally, the CIO Council also has the capacity to provide limited funding assistance to projects where the benefits are clearly government-wide, or where no single agency can, or should, have to fund a project's entire cost. Later in my remarks, I will talk about a specific Year 2000 project the Council is funding based on these criteria.

With this understanding of the Council's mission and basic operating framework in mind, I believe the Council has had a positive impact on the pace and direction of the federal effort to address the Year 2000 problem. I also believe, that within this framework, the Council will continue to do whatever it can to ensure the integrity of the information systems that so many critical government programs and services rely upon. Now let me be more specific about the Council's role and efforts on the Year 2000 problem.

In the first meeting of the CIO Council, which was held in October of last year, the Council identified the Year 2000 issue as one of the five top priorities of federal CIOs. In November, the Council acted to elevate the existing Federal Interagency Year 2000 Committee to a CIO Council Committee — and appointed Ms. Kathy Adams — the Chair of the existing Interagency Committee — to serve as the Chair for the CIO Council's Year 2000 Committee. As Ms. Adams has testified in previous hearings, the Year 2000 Committee is implementing a comprehensive and detailed work plan to address critical cross-cutting, or government-wide, Year 2000 issues. To support the work of the Year 2000 Committee, the full CIO Council

receives a monthly status report from the Chairperson [Ms. Adams], and has acted on several occasions to endorse Committee recommendations for action and assistance.

As I indicated earlier, the Council seeks to support cross-cutting policy initiatives by taking various specific management actions, including

1. Reviewing the progress in resolving critical IT issues,
2. Recommending actions to remove barriers to progress where observed, and
3. Providing funding assistance to critical projects that have government-wide benefits.

The Council has followed this operating model closely with regard to the Year 2000 problem. Specifically, in June, the CIO Council agreed to fund the operation and maintenance of a new information system designed and developed by the Year 2000 Committee. This information system will provide ALL federal agencies access to high quality data on commercial products that claim to be Year 2000 compliant. The CIO Council is strongly endorsing the use of this computer system as the single, most authoritative source for Year 2000 product information in the federal government. By supporting and endorsing the use of this information system, the federal government avoids the needless duplication of time, effort, and information that would otherwise occur if each agency collected and maintained this same information independent of each other.

The Council is also working closely with the private sector to ensure we approach the Year 2000 problem in as cooperative a manner possible with this important sector of the federal IT community. Our goal must be to ensure that federal solutions and Year 2000 policies are both

workable and effective, and we believe close interaction with all stakeholders in the Year 2000 problem will serve us well in achieving this outcome.

Now, I'd like to talk briefly about the Council's efforts to assist OMB in developing Year 2000 quarterly reporting requirements. First, the CIO Council believes strongly that an effective reporting systems is critical to OMB's ability to monitor government-wide progress in addressing the Year 2000 problem and to inform Congress of that progress. The CIO Council has worked closely with OMB over the last six months to develop reporting requirements that will provide accurate information on the size of the Year 2000 problem and the pace of agency efforts to correct non-Year 2000 compliant systems.

In general, the forum of the CIO Council has given CIOs of both large and small federal agencies an opportunity to work directly, as a team, with OMB in formulating Year 2000 policies, such as the quarterly reporting requirements. The CIO Council also provides an effective forum for agencies to raise policy issues to OMB early in the process and to resolve them productively.

The Year 2000 problem is a "shared" problem (i.e., one shared by all federal agencies), and the CIO Council is becoming an effective vehicle for addressing "shared" problems. I believe the joint efforts of OMB and the Council to establish an effective Year 2000 reporting system has had a positive impact on the pace of the federal government's response to the Year 2000 problem, and on its ability to manage the problem effectively. Specifically, these quarterly reporting data will support individual agency CIOs — and the CIO Council at large — in

monitoring federal efforts to correct problematic information systems, and, will support agency CIOs and OMB efforts to take early and decisive action to address high-risk systems.

That concludes my remarks on the CIO Council role and support for resolving the federal government's Year 2000 problem. I recognize that the actions and efforts that I have described here today are but a few modest first steps in addressing the overall Year 2000 problem. However, I believe they exemplify the active role the CIO Council has played, and will continue to play, in solving the Year 2000 problem. Further, I am confident that the progress that these actions reflect will continue as the Council proceeds into its second year of operation.

I'll be glad to answer any questions from the Subcommittee, and I welcome any comments the Committee would offer on how the Federal CIO Council can better serve all sectors [both private and public] of the federal IT community in addressing the Year 2000 calendar date problem.

### *Curriculum Vitae*

*Alvin M. Pesachowitz  
Acting Chief Information Officer  
U.S. Environmental Protection Agency*

*Vice-Chair  
Federal Chief Information Officers Council*

*Alvin M. Pesachowitz began his career in public service in 1968 as a chemical engineer with the Department of Defense. After spending three years with the Department, he joined EPA in 1971 to work on the implementation of the 1970 Clean Air Act.*

*In mid-1973, Mr. Pesachowitz joined the Agency's efforts to develop and implement a management by objectives accountability system. In 1979, he transferred to the Budget Division and was promoted to Budget Director in 1987. In his tenure as Budget Director, he managed the Agency's \$5.0 billion budget and maintained liaison with the Office of Management and Budget as well as the Congressional Appropriations Committee.*

*Mr. Pesachowitz was promoted to Deputy Director of the Office of Information Resources Management in January of 1989 and was appointed Director in October 1989. In this capacity, he developed EPA policy and programs regarding information resources and technology. The Office directs a major effort in information access including public access, State/EPA data sharing, international data sharing, library services and data integration.*

*In December 1992, in order to help during the transition, Mr. Pesachowitz was appointed Acting Comptroller, and in May 1993, he became the Acting Deputy Assistant Administrator for Finance and Acquisition. In this capacity, he provided leadership and management oversight of centralized finance, budget, contract and grant functions of the Agency. He returned to his permanent position as Director of Information Resources Management in November of 1993.*

*In July 1995, Mr. Pesachowitz was appointed the (Acting) Deputy Assistant Administrator. In his capacity of Deputy Assistant Administrator, Mr. Pesachowitz was responsible for the systems and policies that provide the people, resources, and information needed by the Agency. In March 1996, he became the (Acting) Assistant Administrator for the Office of Administration and Resources Management. He oversees a direct budget of \$450 million and a staff of over 1400 diverse employees and manages the Agency's \$6.0 billion budget. Mr. Pesachowitz was appointed Chief Information Office (CIO) in August 1996 and serves as the Vice-Chair for the Federal CIO Council.*

*Mr. Pesachowitz graduated from Rutgers, the State University in 1968 with a B.A. in Liberal Arts and a B.S. in Chemical Engineering. In 1972, he received his Masters Degree in Management from George Washington University. He resides in Falls Church, Virginia with his wife, Connie, and their three boys, Adam, Daniel and Eric.*

Mrs. MORELLA. Thank you, thank you for being so succinct and precise.

Ms. Adams, I'm delighted to recognize you.

**TESTIMONY OF KATHLEEN ADAMS, CHAIR, INTERAGENCY YEAR 2000 SUBCOMMITTEE OF THE CHIEF INFORMATION OFFICERS COUNCIL, ASSISTANT DEPUTY COMMISSIONER FOR SYSTEMS, SOCIAL SECURITY ADMINISTRATION, BALTIMORE, MD**

Ms. ADAMS. Madam Chairwoman and members of the Subcommittees, I'm Kathleen Adams, Assistant Deputy Commissioner for Systems at the Social Security Administration, and I'm testifying here today in my capacity as the Chair of the Chief Information Officers Council Subcommittee on Year 2000.

I appreciate the opportunity to discuss what the Subcommittee is doing to help federal Agencies address the Year 2000 computer problem so that the transition to the new century can be a smooth one.

In the fall of 1995, the Office of Management and Budget, recognizing the critical nature of the problem and that the Social Security Administration had taken positive steps to address it, asked SSA to be the champion for Year 2000, and increase awareness of the issue across the Government.

In this role, we organized an informal committee in November of 1995, which we called the Year 2000 Interagency Committee. I might mention that the hearings which your Subcommittees held in the spring of 1996 did much to increase the awareness of the Year 2000 issue, and participation in this informal committee, and, as a result, it grew very rapidly.

I am pleased to say that today every Department and every major Agency is represented on the Committee. In August of 1996, as Mr. Pesachowitz mentioned, the CIO Council, which had been established to review and provide guidance on information technology issues across the Federal Government, decided that the—well, actually that's when the CIO Council came together, in October.

They decided that the Year 2000 issue was one of the most pressing information technology issues facing government, and that Council made the Year 2000 Interagency Committee, which at that point was an informal committee, an official Subcommittee of the CIO Council and our name became the CIO Council Subcommittee on Year 2000.

It's important to keep in mind that each Agency must find solutions to the Year 2000 problem that meet its unique needs, since there is no single approach that all Agencies can employ.

While each agency head and CIO is responsible for ensuring that his or her systems function properly on January 1, 2000, the focus of the Subcommittee on Year 2000 is to facilitate this major undertaking by addressing cross-cutting aspects of the problem such as interagency data exchanges, availability of various vendor products, and sources of mutual help that the Agencies can use.

I believe we are meeting our goals to raise awareness and facilitate timely action. We can point to solid accomplishments, including development of a Year 2000 Website on the GSA Home Page,

a best-practices guide for all levels of government, which describes successful approaches by public and private sector organizations for addressing the various phases of fixing the Year 2000 problem.

I might add that GAO used this as the basis for its assessment guide on Year 2000, which is currently in an exposure draft, and will be put in final shortly.

We recommended a four-digit year standard for interagency data exchanges. We've developed a standard definition of Year 2000 compliance.

That was one of the issues. There was no real definition of what compliance meant. And we have developed standard contract language that all government Agencies could use in their procurement documents to ensure that vendor products and services that they're buying are Year 2000-compliant.

We also conducted two conferences, each attended by over 450 people in Washington, DC. from government and industry. I think all federal Agencies recognize the importance of dealing with this issue, and they have been extremely cooperative in dealing with the Subcommittee on Year 2000.

Our accomplishments would not have been possible without such complete support and cooperation. In addition, we've been working effectively, I believe, with the information technology industry groups on many issues of mutual concerns.

We have worked very closely with the Information Technology Association of America and the Industry Advisory Council on issues such as standard contract language, contractor support services, and commercial off-the-shelf packages of software.

The Subcommittee on Year 2000 is currently focusing on several new initiatives that we think will facilitate each agency's ability to address this challenge. The most important of these is development of a database to be made available throughout the government on the Web, which will contain information regarding whether commercial off-the-shelf software from vendors that federal Agencies presently use will function properly when handling dates beyond 1999.

I should again point out that responsibility for ensuring that the government systems function properly in the next century lies with the heads and the CIOs of the Agencies. The Subcommittee on Year 2000 does not track where Agencies are in dealing with the Year 2000 problem, or the effectiveness of an individual organization's plan. That is the role of OMB, as you have heard from Ms. Katzen.

In conclusion, it would be impossible to overstate the importance of a smooth and timely transition of the government systems to accommodate Year 2000 and ensure no interruption of the critical government services that we provide in this government.

All of the departments and Agencies participating in the Subcommittee on Year 2000 recognize what needs to be accomplished over the next 2 years, and there is no hesitancy to work together to address common issues.

I can assure you that the Subcommittee will continue to work in this critical undertaking.

Thank you.

[The prepared statement of Ms. Adams follows:]



HEARING BEFORE THE  
COMMITTEE ON SCIENCE  
SUBCOMMITTEE ON TECHNOLOGY

FOR RELEASE UPON DELIVERY

AND THE

COMMITTEE ON GOVERNMENT REFORM  
AND OVERSIGHT  
SUBCOMMITTEE ON GOVERNMENT  
MANAGEMENT, INFORMATION AND  
TECHNOLOGY

ON

YEAR 2000 QUARTERLY REPORT TO OMB  
JULY 10, 1997



STATEMENT BY  
KATHLEEN ADAMS  
CHAIRPERSON, CHIEF INFORMATION  
OFFICERS COUNCIL SUBCOMMITTEE  
ON YEAR 2000

Madame Chairman, Mr. Chairman, and Members of the Subcommittees:

I am Kathleen Adams, Assistant Deputy Commissioner for Systems for the Social Security Administration, but I am appearing today in my capacity as Chair of the Chief Information Officers (CIO) Council Subcommittee on Year 2000. I appreciate the opportunity to discuss the efforts of the CIO Council Subcommittee on Year 2000, formerly known as the Year 2000 Interagency Committee. I will begin by outlining the reasons why systems changes are needed to deal with the year 2000 and then describe what the Subcommittee is doing to help Federal agencies address the problem, so that the transition to the new century is a smooth one.

Reason Change Is Needed

As you are well aware, a unique event will take place on January 1, 2000. On that day, we will experience the first century change since the start of the computer era. This event poses enormous challenges for the data processing community, as public and private sector organizations around the world prepare for the single largest integration feat since computers entered our daily lives.

The reason that the century change poses a problem is that many computer programs store and use only the last two digits of a year and assume that the first two digits are 19. Under this practice, computer logic operations work as long as dates are in the same century, but problems arise when it is necessary to use dates in two different centuries. For example,

subtracting December 31, 1995, from December 31, 2005, to determine someone's age would produce the incorrect answer of minus 90 instead of the correct result of 10.

The interaction of dates among different programs, systems, agencies, and levels of government is one of the factors which make the Year 2000 issue so complex. Private industry faces these same issues.

#### Interagency Activities and the CIO Council

In the fall of 1995, the Office of Management and Budget (OMB), recognizing the critical nature of the problem and that the Social Security Administration (SSA) had taken positive steps to address it, asked SSA to be the champion for Year 2000 and increase awareness of the Year 2000 issue. In this role, we organized an informal committee which we called the Year 2000 Interagency Committee. The purpose of the Committee was to raise awareness of the Year 2000 and address cross-cutting issues which affected many or all Federal departments and agencies. The Committee began meeting in November 1995 with only a few representatives attending. The number of participants grew steadily with each regular meeting as more and more departments and agencies became aware of the Committee's purpose. I might mention that the hearings which your Subcommittees held in the Spring of 1996 did much to increase awareness of the Year 2000 issue, and participation in the Year 2000 Interagency Committee grew rapidly as a result.

In August 1996, the Information Technology Management Reform Act, which was enacted as part of Public Law 104-106, became effective and mandated a CIO Council to review and provide guidance on information technology issues across the Federal Government. At the CIO Council's first meeting in August 1996, it decided that the Year 2000 issue was one of the most pressing information technology issues facing the government. In November 1996, the Council made the Year 2000 Interagency Committee an official subcommittee of the Council, and our name became the CIO Council Subcommittee on Year 2000.

While our name changed, and we now have official status, our purpose has not changed. The Subcommittee's role is to raise awareness of the Year 2000 issue, address facets of the issue that cut across government, seek mutual solutions where possible, and share best practices.

Our official role has, however, given us some distinct advantages. As Chair of the Subcommittee, I attend meetings of the CIO Council to provide monthly status reports on Subcommittee activities and bring to the Council issues requiring its attention or a decision. In addition, the Council's focus on information technology issues gives the Subcommittee's activities more visibility within the Federal agencies.

It is important to keep in mind that each agency must find solutions to the Year 2000 issue that meet its unique needs, since there is no single approach that all agencies can employ. While each agency head and CIO is responsible for ensuring that his or her systems function

properly on January 1, 2000, the focus of the Subcommittee is to facilitate this major undertaking by addressing cross-cutting aspects of the problem, such as interagency data exchanges, availability of various vendor products, and sources of mutual help across agencies.

Accomplishments of the CIO Council Subcommittee on Year 2000

I believe the Subcommittee is meeting its goal to raise awareness of the Year 2000 issue and facilitate timely action. The Subcommittee can point to solid accomplishments, including development of:

- o A Year 2000 website on the General Services Administration (GSA) homepage, which can be reached at [www. itpolicy.gsa.gov](http://www.itpolicy.gsa.gov);
- o Briefings on the Year 2000 issue and its ramifications for numerous government agencies, including State agencies;
- o A recommended four digit year standard for interagency data exchanges, which was done in conjunction with the National Institute of Standards and Technology and approved by the CIO Council;

- o A definition of Year 2000 Compliancy, which was published in the Federal Acquisition Regulation on an interim basis in January 1997;
- o Standard contract language for procurement of vendor products and services to ensure they are Year 2000 compliant;
- o A framework for evaluating and dealing with Year 2000 issues--a Best Practices guide for all levels of government; and
- o Contacts and information exchanges with information technology industry groups to increase their awareness of how government agencies are dealing with the Year 2000 problem and address issues of mutual concern.

In addition, the Committee sponsored two conferences to bring together the stakeholders, both from inside and outside government, on the Year 2000 issue. The Subcommittee, SSA, and the Armed Forces Communications and Electronics Association (commonly known as AFCEA) sponsored the Millennium Time Bomb Conference on May 2, 1996, in Washington, D.C. Almost 500 people from Government agencies and private sector firms attended the conference to raise awareness of the Year 2000 problem and discuss experiences and approaches for addressing the problem. A follow-up conference called "Year 2000 Solutions: What Works" was held on March 5, 1997. Over 450 participants heard panelists representing Federal and State government and the private sector discuss the

challenges and lessons learned in implementing their Year 2000 programs. The emphasis of this conference was on identifying solutions that are being used and are working. Twenty-seven vendors that have Year 2000 products or services were also present to answer questions and distribute product literature.

A significant accomplishment of the Year 2000 Interagency Committee is the formulation of our Best Practices guide to provide a framework for agencies to deal with the Year 2000 challenge. The guide is designed to assist Federal agencies in planning, managing, and evaluating their systems affected by the Year 2000 issue. The guide draws on the best practices of Federal agencies, as well as the private sector, for each phase of the process. These phases have been defined as:

- o The Awareness phase, in which the organization defines the Year 2000 problem and ensures that everyone in the organization is aware of the problem;
- o The Assessment phase, in which the organization identifies core business areas, analyzes systems supporting these areas, and identifies resources;
- o The Renovation phase, in which the organization converts databases and software and modifies interfaces;

- o The Validation phase, in which the organization tests converted or replaced software; and
- o The Implementation phase, in which the organization implements converted or replaced software and implements data exchange contingencies, where necessary.

Each agency will have to complete all the steps to be able to meet the challenges posed by the Year 2000 issue.

The best practices guide is available on the Year 2000 website, and is regularly updated to reflect current best practices.

In addition, the Subcommittee worked with OMB to develop the format for the quarterly status report each agency must submit to OMB regarding the progress of its Year 2000 program. OMB asked the Subcommittee to provide input on the report format. OMB wanted to obtain adequate information from each agency to track and monitor Year 2000 progress across Government and report to Congress, but did not want reporting to be so onerous that it would overburden the agencies with recordkeeping. Hopefully, the format for the agency status reports accomplishes these goals.

I think all Federal agencies recognize the importance of dealing with the Year 2000 issue, and they have been extremely cooperative in dealings with the Subcommittee on Year



2000. Our accomplishments would not have been possible without such complete support and cooperation.

CIO Council on Subcommittee on Year 2000 Activities

The Subcommittee is continually evaluating the need to deal with emerging facets of the Year 2000 issue. Since these issues are numerous and far-reaching, we have formed subgroups to focus on specific areas of the Year 2000 issue. We have subgroups to deal with:

- o Best Practices--works on identifying best practices for Year 2000 solutions and updates the Best Practices guide;
- o State Issues--works with the National Association of State Information Resources Executives (NASIRE) and other State groups to address State/Federal interface problems resulting from the Year 2000 issue, as well as items of mutual interest;
- o Contract Language and GSA Schedules--works to standardize the definition of Year 2000 Compliance, provide contract language for Year 2000 compliant products, and make Year 2000 products and services available through GSA schedules;
- o Data Exchange--works on problems relating to exchanges of data among Government agencies or the Government and third parties, particularly where multiple agencies are involved;

- o Commercial Off-the-Shelf (COTS) Software--works to obtain and provide information regarding whether commercial-off-the shelf software presently in use in Federal agencies functions or will function properly when handling dates beyond 1999;
- o Telecommunications--works on issues affecting telecommunications;
- o Biomedical--works on issues affecting biomedical equipment; and
- o Industry--works with industry information technology groups to increase awareness of the Government's need for Year 2000 services and products and addresses issues of mutual concern.

The subgroup structure has enabled us to focus resources on the individual facets of the Year 2000 issue by using the expertise of the Subcommittee members where it can do the most good.

We have been working effectively with the information technology industry on many issues of mutual concern. We have worked closely with the Information Technology Association of America (ITAA) and the Industry Advisory Council (IAC) on numerous issues, such as standard contract language, the need for contractor support services, and COTS software. We are encouraging the industry to advise government buyers as soon as possible when Year 2000 compliant versions of software packages will be released so that government agencies can better plan their implementation and testing programs. Many Year 2000 solutions will require close cooperation between Government and industry. The Subcommittee on Year 2000, since it represents all departments and agencies, has and will continue to facilitate that

cooperation by being the focal point for contact with the information technology industry groups on the Year 2000 issue.

#### Next Steps

While we continue to work on the activities we have in progress, the Subcommittee is currently focusing on several areas of the Year 2000 issue that we think will facilitate agencies' ability to address the challenges of Year 2000. The Subcommittee is developing a database, to be made available throughout government, which will contain information regarding whether commercial-off-the-shelf (COTS) software presently in use in Federal agencies functions or will function properly when handling dates beyond 1999. The database will indicate whether the product is compliant and, if it is not, when the Year 2000 compliant version will be available.

Building one comprehensive database all agencies can use will save each agency the expense and time to construct its own database of all of its vendor products. This database is being built now and will be turned over to GSA to be maintained and made available on the Year 2000 web site. At the June 1997 CIO Council Meeting, the Council approved the funds to maintain this database, which we call the Y2K COTS System. It presently contains information on almost 3000 products from over 600 vendors. It will be available on the web site in September 1997.

Another important issue that we are addressing is how to minimize the burden on State and local governments resulting from the Federal transition to Year 2000 compliant systems. The data exchanges, mandated or voluntary, between the different levels of government will all be affected by the changes made to deal with the Year 2000 issue. We are focusing on data exchanges where multiple agencies are involved to minimize the impacts on the States.

I should again point out that the responsibility for ensuring that the Government's systems will function properly in the Year 2000 issue lie with the head and Chief Information Officer of each department and agency. The Subcommittee on Year 2000, like the Interagency Committee before it, does not keep track of where agencies are in dealing with the Year 2000 issue or measure the effectiveness of each organization's plan to deal with the issue. OMB has had and continues to have that role.

#### Conclusion

In conclusion, it would be impossible to overstate the importance of the need for a smooth and timely transition of the Government's systems to accommodate the Year 2000 as we enter that year. All of the departments and agencies participating in the Subcommittee on Year 2000 recognize that there is no question of what needs to be accomplished over the next several years, and no hesitancy to work together to address common issues. I can assure you that the Subcommittee on Year 2000 will continue its work in this critical undertaking.

## Kathleen M. Adams

Kathleen Adams is the Assistant Deputy Commissioner for Systems at the Social Security Administration (SSA). She is responsible for overseeing and managing all systems development and integration, telecommunications and systems operations to support Social Security's programs. These systems account for more than one quarter of the United States budget and touch the lives of all Americans. They pay benefits to almost 50 million Americans each month, maintain records of earnings for all workers and issue 17 million social security cards per year.

Prior to assuming her current position in February 1997, Ms. Adams was the Associate Commissioner for Systems Design and Development, SSA. Throughout her career, she has held a variety of technical and managerial positions in information systems, operations, policy and budget components in SSA and the Health Care Finance Administration.

Ms. Adams is the chairperson of the Year 2000 Subcommittee of the CIO Council. This subcommittee is addressing the need for all government agencies to ensure their computer systems continue running when the calendar changes to 2000. She is the chairperson of the Advisory Committee on Data Processing of the International Social Security Association. She serves on the Information Technology Resource Board and is an Associate Director of AFCEA.

Ms. Adams has received numerous awards, including the Commissioner's Citation and awards from Government Computer News, the Federal Executive Board, the Secretary of Health and Human Services and the Senior Executives Association Achievement Award. She was selected by Federal Computer Week to the Federal 100 in 1996.

Ms. Adams received her B. A. from the University of Maryland. She has done graduate work at the George Washington University and has completed executive training at the Kennedy School of Government, Harvard University.

Mrs. MORELLA. Thank you, thank you, Ms. Adams.  
Mr. Thompson, we look forward to hearing from you, sir.

**TESTIMONY OF JOE THOMPSON, CHIEF INFORMATION OFFICER, GENERAL SERVICES ADMINISTRATION, WASHINGTON, DC**

Mr. THOMPSON. Madam Chairwoman Morella, Ranking Members, and distinguished members of the Subcommittees, thank you for the opportunity to discuss the challenging issues of the Year 2000.

GSA is pleased to provide a copy of my written testimony. However, to paraphrase an old saying, I've given you a thousand words in my testimony. What's being held up before you—and I'll take my 5 minutes to highlight the major points from my written testimony from that single picture.

That single picture represents the thousand words, and you should have a copy being distributed to you in smaller print. This picture, indeed, summarizes the progress that GSA has made in resolving within the Agency and within the business community, the Year 2000 issue.

For example, one of our major businesses which affects most of the buildings and operations in government, we have made—I have been on a proprietary outmoded mainframe system for the last 25 years.

We have now replaced that system with a Year 2000-compliant system. That was accomplished on January of this year.

In order to take that system off, we saved \$5 million. If we had been required to upgrade that system through code revision, it would have cost us \$20 million.

By getting rid of the old system, we saved \$5 million in savings which we now are using to buy a new system. So our costs went down in terms of that modernization project.

So what did we get and where are we in terms of Year 2000 compliance? Up at the upper left-hand side, you see IRIS. That's an automated system that gives a comprehensive view of all new construction, major modernization, repairs and alterations for all of the GSA buildings nationwide, and it is now Year 2000-compliant, today.

Below that you see EAS, which is an Electronic Acquisition System already in place as I sit here before you today, which virtually automates every procurement process from creating requisitions to the final closeout. For the first time PBS is able to track contracts using milestones during any point in its contracting process, and it is Year 2000-compliant.

Looking further down, you see we have gone to the Internet for our business enterprises because all of the businesses within GSA must be Year 2000-compliant in order for us to do business, both national, international, state, and local.

And we are working with all of those bodies in terms of accomplishing that. The same is true of our human resources. If you look over to Fiscal Year 1998, the first one at the top, which is CHRIS, that is a human relations interface system for our personnel.

That system will be Year 2000-compliant, and is in the process of being installed even as we speak.

Looking below that, you see what is known as PBS-Star. That is a system for administering and tracking real property which will also be Year 2000-compliant.

It will be available in 1998, via Internet, to more than 240 property management centers and regional offices nationwide, including Chicago, as well as government Agencies and private sector companies. So that practice will be in place, completed, Year 2000-compliant, 1998.

If you look at this whole layout of the entire picture, what we've given to you is the same as in my testimony. It shows you that by January 1, 1999, we will be, within the General Services Administration, Year 2000-compliant, implemented and completed, operational, working.

Our Federal Supply Service, which is another major part of our business enterprise, we have spent \$1 million to fix 40 percent of the code. In that one, we needed, indeed, to go back and upgrade, and we plan to spend another \$1.5 million to complete that in Fiscal Year 1998.

Let me move over to the planning and the management aspects. We have a plan in the GSA and a process of review, led by our Administrator of General Services, David Barram, and a Business Technology Council which looks at this investment.

We are also working, government wide, to raise awareness and to share best practices. And we are working with the industry to leverage the resources to fix this problem.

We will be successful. But let me agree with you about one of the concerns that you've raised.

Since GSA is the business arm of government, success in the Year 2000 means that our industry partners in the state, local, federal, international, and business community, must also be compliant and ready to provide seamless communication among all parties.

If our telephone communications networks from here to across the world don't interface in Year 2000 compliance, being compliant in GSA will still not mean that we can conduct business in Chicago or Tennessee or Missouri or in Europe because those switches and those interfaces must take place.

Many of our partners have not moved rapidly or aggressively enough to assure that they, too, will be ready on time. We are working with 24 nations in the international community in looking at this problem.

We believe that continuing attention and the interest of Congress and the Administration in this matter will assist both in raising awareness to the problem, and in stimulating solutions on all fronts.

Simply put, products and services must be tested, end-to-end among all business partners to prove that they function in the 21st Century. That's why we are going to be compliant in January of 1999, so that we have the whole year in order to look at those interfaces.

Just having a box that is Year 2000-compliant won't do it. Just having identified embedded chips won't do it.

It will be important to have all of those components, and we are working through groups and through the Interagency Committee to accomplish that. But the year-end testing is important.

Finally, I should note that the Year 2000 work has been accomplished under the leadership and guidance of the Office of Management and Budget, with assistance from the private sector, including the Industry Advisory Council, the Information Technology Association of America, and the Coalition of Government Procurement.

I'd like to thank the members again for this opportunity to speak, and for the continued cooperation between the Congress and the Executive Branch in meeting the Year 2000 challenge.

[The prepared statement and attachments of Mr. Thompson follow:]



STATEMENT OF  
MR. JOE M. THOMPSON  
CHIEF INFORMATION OFFICER  
GENERAL SERVICES ADMINISTRATION  
BEFORE THE  
SUBCOMMITTEE ON TECHNOLOGY  
COMMITTEE ON SCIENCE  
AND THE  
SUBCOMMITTEE ON GOVERNMENT MANAGEMENT,  
INFORMATION, AND TECHNOLOGY  
COMMITTEE ON GOVERNMENT REFORM  
AND OVERSIGHT  
U.S. HOUSE OF REPRESENTATIVES  
JULY 10, 1997



Madame Chairman, Mr. Chairman and distinguished members of the Subcommittees, thank you for the opportunity to discuss the challenges raised by the Year 2000 issue.

I am Joe M. Thompson, Chief Information Officer (CIO) of the General Services Administration (GSA). The Office of the CIO was created in February 1996 to serve as GSA's information technology leader. The CIO is responsible for applying state-of-the-art information technology to achieve GSA's business goals and citizen satisfaction.

I would like to share with you the progress GSA has made in resolving the Year 2000 issue within the agency and as a leader governmentwide.

The Administrator of General Services, Dave Barram, has identified the Year 2000 issue as a top priority for the agency, raising it to the highest level of awareness and action. As a result, through the collaboration of GSA's Business Technology Council, chaired by our Administrator and comprised of the CIO, the Chief Financial Officer and the agency's top leadership, and our Information Technology Council, chaired by our Deputy CIO, we have put into action a multi-level approach to solve the problem in GSA. Our approach has been to upgrade our systems to Year 2000 compliance as part of our overall strategy to improve our systems. The progress of Year 2000 implementation plans

submitted to the CIO by the GSA business lines is being monitored monthly by our Business Technology Council and Information Technology Council. I am glad to report that GSA is on track and I am satisfied with our progress so far.

For example, the Public Buildings Service's (PBS's) legacy systems have been operating on a proprietary and out-moded mainframe platform for over 25 years. PBS's PLUS, implemented in January 1997, migrated the legacy data to a modern, Year 2000 compliant platform saving GSA more than \$5 million a year.

PBS's STAR, a system for administering and tracking real property, will also be Year 2000 compliant. STAR will be available in 1998 via Internet to more than 240 property management centers and regional offices nationwide, as well other government agencies and private sector companies.

PBS's EAS, a Year 2000 compliant electronic acquisition system already in place, automates virtually every procurement process - from creating requisitions to the final close-out. For the first time, PBS is able to track all contracts using milestones during any point in the contracting process.

PBS's IRIS, an automated system that is Year 2000 compliant, gives a comprehensive view of all new construction, major modernization, repairs, and alteration projects.

GSA's Federal Supply Service (FSS) serves as the Federal procurement arm of the government. FSS's Internet-based electronic commerce system for Federal customers, GSA Advantage, is Year 2000 compliant. In addition, FSS completed an overhaul, consolidation and outsourcing of its data centers into one, Year 2000 compliant facility in Eagan, MN. Also, FSS has already spent about \$1 million to fix 40 percent of the code in its legacy systems, and plans to spend another \$1.5 million to complete the task by the third quarter of 1998.

GSA's Office of Human Resources and Office of Finance are both working on replacement systems which will be Year 2000 compliant and up and running in 1998.

GSA is also working governmentwide to raise awareness, share best practices and leverage the resources needed to fix the problem. For example:

GSA's Federal Supply Service has notified manufacturers, service and equipment providers that products sold to the government must be Year 2000 compliant. To help government purchasers, a Year 2000 compliant logo is being displayed on compliant information technology items sold through the FSS multiple awards schedules program.

GSA's Federal Telecommunications Service (FTS) has incorporated Year 2000 compliance language in all current and follow-on procurements and contracts, including the FTS2001 solicitation and its contracts for wireless service, international service, and all other procurement actions.

Further, GSA's Office of Governmentwide Policy has issued "Recommended Contract Year 2000 Compliance Language" both internally to GSA, and governmentwide as a Federal Acquisition Regulation rule. GSA's Office of Governmentwide Policy also maintains a Year 2000 Web site ([www.itpolicy.gsa.gov](http://www.itpolicy.gsa.gov)) which is currently averaging 10,000 hits monthly.

The Office of Governmentwide Policy manages and maintains the governmentwide Year 2000 Information Directory for the Chief Information Officers' Council Subcommittee on Year 2000. This Directory is a one-stop source for information on Year 2000 issues for Federal agencies. It contains a database of commercial-off-the-shelf (COTS) products which can be utilized by the entire information technology community, and anyone interested in Year 2000 information. A new interactive COTS database is being developed that will contain information provided by agencies and vendors. The Directory also contains the "Best Practices" documents prepared by the Subcommittee. There are documents on each of the following phases: awareness, assessment, renovation, validation and implementation. These phases have been adopted by the Office of Management and Budget for agencies to use as milestones when

correcting their computer systems. Examples of other information available on this web site are links to conferences, Federal, state, and international sites, documents from the Office of Management and Budget, General Accounting Office, and Congressional hearings.

My Deputy CIO, Don Venneberg, was instrumental in helping to establish what is now referred to as the CIO Council Subcommittee on the Year 2000, chaired by fellow panelist Kathy Adams. GSA provides direct support for the group and from this effort, a governmentwide "Best Practices" guide has been produced.

GSA chairs the Real Estate Building Subgroup of the CIO Council's Subcommittee on the Year 2000. Specifically, this group, through GSA's Public Buildings Service, is requesting that manufacturers, trade associations, building and facilities groups, such as the Building Owners and Managers Association and the International Facility Management Association, identify products with the potential for causing building systems malfunctions. The goal is to obtain Year 2000 product testing and Year 2000 compliance certification from vendors on products, including building automation and energy management systems, elevators, alarms, clocks, security and power supplies, and all systems or devices with embedded microchips or software.

GSA also chairs the Telecommunications Subgroup of the CIO Council's Subcommittee on the Year 2000, which has launched a major initiative to help

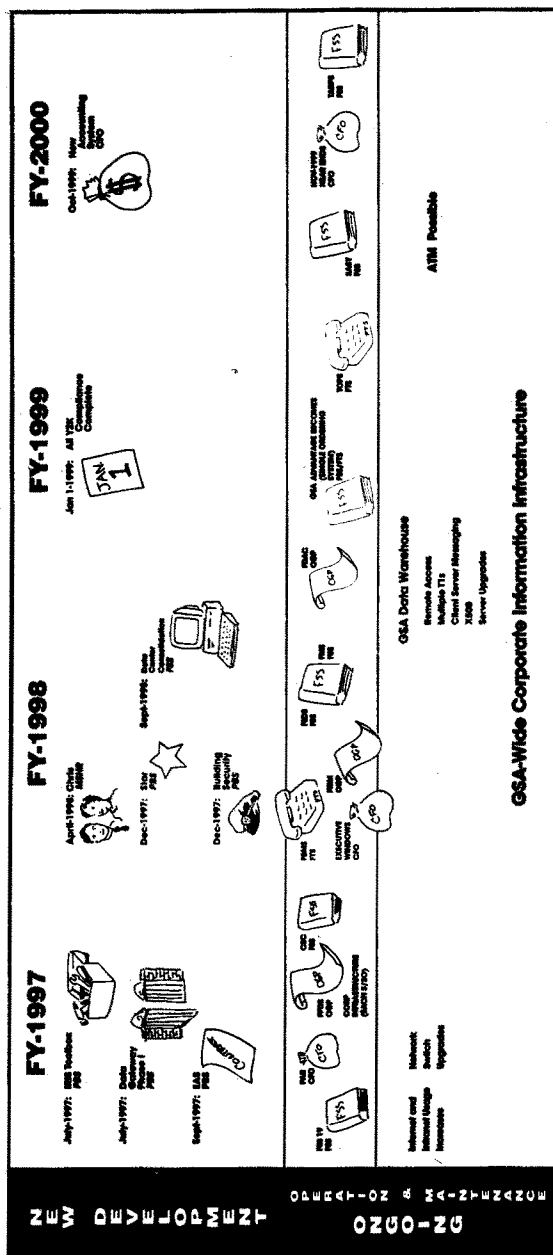
senior government managers identify vulnerable system components and peripheral devices.

Since GSA is the business arm of government, success in the Year 2000 means that our industry partners, and other state, local, Federal and international agencies must also be compliant and ready to provide seamless communication among all parties. Many of our partners have not moved rapidly or aggressively enough to assure that they, too, will be ready on time. We believe that the continuing attention and interest of Congress in this matter will assist in both raising awareness of the problem and stimulating solutions on all fronts.

Simply put, products and services must be tested end-to-end among all business partners to prove that they will function into the twenty-first century.

Finally, I should note that all of the Year 2000 work has been accomplished under the leadership and guidance of the Office of Management and Budget with help from private sector partners, such as the Industry Advisory Council, the Information Technology Association of America, and the Coalition for Government Procurement.

I would like to thank the members again for this opportunity to speak and for the continued cooperation between Congress and the Executive Branch in the meeting the Year 2000 challenge.







**Joe M. Thompson**  
**Chief Information Officer**  
**General Services Administration**

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Joe M. Thompson heads the new Office of the Chief Information Officer, appointed on January 2, 1996 by the Administrator of the General Services Administration (GSA). GSA, often called the Federal Government's business manager, is an executive branch agency with about 14, 500 employees and an oversight responsibility for \$61 billion. Mr. Thompson will share responsibility for managing government-wide investment and expenditures of over \$200 billion annually.

As the Chief Information Officer for GSA, Mr. Thompson reports directly to the Administrator and is responsible for directing all of GSA's Information Technology (IT) investments, including annual IT capital planning for the agency, benchmark and performance plans, procurement plans, an on-line data collection and management systems. The Office also produces quarterly and annual reports on the cost-cutting results of agency-wide IT management.

Prior to his appointment as GSA's Chief Information Officer, Mr. Thompson served as the Commissioner of GSA's Information Technology Service. He had primary responsibility for carrying out the recommendations of Congress and the National Performance Review to improve the use of information technology to better serve citizens; for the implementation of electronic procurement; for the replacement of obsolete computer applications and systems; nationwide local telecommunications service for the federal government and the re-engineering of government processes supporting Government-wide Electronic Mail and the Information Superhighway. Mr. Thompson also served as a primary consultant during the enactment of the Federal Acquisition Streamlining Act of 1994, the most significant procurement reform legislation since World War II. Through 1995-96 he chaired a CIO Council Working Group leading the implementation of the Information Technology Management Reform Act of 1996, which is now known as the Clinger-Cohen Act. Mr. Thompson started his career with GSA as a chemist in GSA's regional office in Fort Worth, Texas, his home state. He has served in a number of significant positions within GSA including eight years as Assistant Regional Administrator for the Information Resources Management Service in Philadelphia.

Mr. Thompson now serves as the Chairman, of the CIO Capital Planning and Investment Committee, Key Advisor to the Chairman of the GSA Business Technology Council, member of the Information Management Forum, member of the International Institute of Business Technologies Board of Directors and Advisors, and a fellow of InfoTEST International the world's leading Internet Alliance.

He received two Presidential Rank Awards for Meritorious Service, from President George Bush in 1990 and from President William Clinton in 1996. He also received the GSA Administrator's

Quality Award in 1992; GSA's Meritorious Service Award in 1981 the Blacks in Government "Leadership Excellence 1997 Award" and several other awards for outstanding performance and leadership.

Mr. Thompson received a B.S. in chemistry from Prairie View A&M University in Texas; a M.S. in chemistry from Texas Southern University, Houston, TX; and a M.S. in public administration from DePaul University, Chicago, IL.

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Mrs. MORELLA. Thank you. I thank all three of you for your testimony. You really were very cognizant of the time situation, and you presented the situation quite well.

I'd like to start off, I guess, with GSA, and then anyone else who wants to add comments to it.

GSA has incorporated a range of Year 2000 services into the multiple award schedules. Also, you're exploring the use of the schedules to identify 2000-compliant products.

Now, what I wonder is, will GSA be compiling a list of the Year 2000-compliant information technology products?

Mr. THOMPSON. The answer is yes. Today we have some 30,000 that have been already identified, that are in the inventory, can be reached through the Internet, and can be purchased.

Those items have been put in place under a contract clause which reads as follows, as an excerpt, "The contractor warrants that each hardware, software, and firmware product delivered under this contract and listed below shall be able to accurately process date data, including but not limited to calculating, comparing, and sequencing from and into and between the 20th and the 21st Centuries."

We also have identified a logo so that when you buy that equipment through our services, it has a logo on it that says "Year 2000-Compliant."

And it covers with it, the warranty provisions that are provided internationally and within the private sector, which reads as follows:

"The remedies available to the Government under this warranty shall include repair and replacement of any listed products whose non-compliance is discovered or made known."

So the answer is yes, it is a continually improving inventory. One of your members asked how are the industries moving forward in terms of the quarter. I believe that was Congressman Davis in terms of how many per quarter are now producing new products that are Year 2000-compliant.

Over the last 6 months, sir, all industries are moving to provide only products that are Year 2000-compliant from the private sector. And those are the contract stars that we are using as a part of our inventory data.

Mrs. MORELLA. I heard that sometimes information technology products, the vendors may believe they're Year 2000-compliant, and they are actually not compliant.

It takes testing, actually, to determine this. Even testing of individual products of the same model or product series can yield different results because microchips from different sources can be used within the same model or product series.

So I wonder what has your involvement been in terms of the embedded chip issue?

Mr. THOMPSON. You are absolutely correct. That is the concern that we have to know whether or not you have an embedded chip issue must come from the manufacturer.

For example, in long distance telephone calls, they are switched primarily by computers. So if they have information within AT&T, MCI, any of the long distance telephone companies has the embedded information in there will affect that date.

They are the only ones who can tell you that.

And so the real answer is, they can certify back and say yes, it is compliant, but one of our international carriers could say the same thing. And you're absolutely correct. It may or may not work with the instrument that's on our desk and still meet the qualifications.

The only way to tell is to test it through a total system, which is what we're talking about, at the end. It must be interconnected and tested.

Mrs. MORELLA. So you are doing that?

Mr. THOMPSON. We are doing that.

Mrs. MORELLA. That list that you have of the 30,000, has that gone through any testing?

Mr. THOMPSON. Those items have been tested and verified by the corporations themselves whose records of testing can be obtained from them. We have not ourselves entertained the staff to go in and do that.

Mrs. MORELLA. But you have seen how they ascertain that they have tested it or whatever?

Mr. THOMPSON. They are required to do that as a part of a contracting validation process.

Mrs. MORELLA. The Good Housekeeping Seal of Approval. All right.

You have a good list.

Do you have a bad list?

Mr. THOMPSON. We do have a bad list. In fact, the same items, just as with any other items.

For example, we are familiar with an incident in which a customer ordered 20 and when they were actually tested in their particular facility, 12 of them did not operate.

In order to get the proper kinds of results during the testing, the problem was not with the validation but it was again testing between the whole system involvement.

And so it did not meet that qualification and the manufacturer replaced them.

Many of these kinds of interfaces are the kinds of things that we can only accomplish if we have a cooperative effort from the private sector, the public sector, and other entities.

Mrs. MORELLA. Let me just mention something I mentioned to the previous panel and that is that we are working on language to go into the Postal Treasury Appropriations bill that would require that the Federal Government only purchase information technology that is 2000 compliant, with a few little latitude in there is absolutely necessary and you would agree with that because this would be—

Mr. THOMPSON. We have put that language into our own GSA contracts and our Office of Government-wide Policy has issued recommended Year 2000 compliance language, both internally to GSA government wide, and through the federal acquisition rules.

That information is available on our web site. WWW@policy.gsa.gov, and it is a part of my testimony.

We are currently averaging more than 10,000 inquiries monthly coming in and looking at that data, so that we know that the government wide that information is being attributed to this problem.

Mrs. MORELLA. Are you aware of any purchases of non-2000 compliant technology software?

Mr. THOMPSON. Only the kinds of things that interface with systems that are not Year 2000 compliant.

For example, if you're operating an old FAA aviation system, which has language that has not been changed, and you need to modify it or upgrade it, you must use the old language that's compatible with it.

But if you have moved to a new system, there is a new kind of information and products available that will address it.

Mrs. MORELLA. I have some other questions, but may I direct them to you, because we are going to be going to vote and I think I'm going to adjourn this panel, only because it's going to be too difficult to get people back with this schedule.

But I do want to ask those questions.

But I want to give Mr. Davis an opportunity to ask his questions before we break.

Mr. DAVIS of Illinois. Thank you very much, Madam Chairwoman.

I have just one question.

Ms. Adams, as the Chairperson of the Subcommittee of the Council, what is the biggest problem that the Council sees in terms of Agencies being able to comply with the time frames?

Ms. ADAMS. I think the basic challenge to the whole problem is just getting a handle on everything that needs to be addressed.

I think, as we get through the various phases of fixing the problem, a very time-consuming and a very difficult part is going to be testing, not only testing your own systems, but making sure that, where you exchange data between other entities and other systems, that is all done on time and tested, and that all this is done before the date.

We cannot slip the date, so I would say data exchanges and testing.

Mr. DAVIS of Illinois. And jokingly, Mr. Thompson, when did GSA start getting ready on this?

Mr. THOMPSON. GSA began moving aggressively moving on this problem in 1995.

Mr. DAVIS of Illinois. Thank you.

Thank you, Madam Chairwoman.

Mrs. MORELLA. I wanted to give Mr. Bartlett an opportunity to make a comment or ask a question too.

Mr. BARTLETT. Thank you very much.

Mr. Thompson, I notice you indicated that your agency was going to be up and running a full year ahead of schedule so that you would have a year to look at interface problems.

I noted from the previous panel that a number of the Agencies are anticipating being ready just in time.

Do you think that the lack of a time period for looking at interface problems and so forth is going to create some problems if a number of the Agencies are up and ready just in time?

Mr. THOMPSON. Yes.

Mr. BARTLETT. Do the other panel members agree?

Ms. ADAMS. Yes. I would like to add one thing to that, though. In the case of the Social Security Administration, we show our im-

plementation date as 11/99 because we will actually have all of our software ready and it will all be integration tested by December 1998.

We, too, are using that last year to run our software in production and test it with other software coming in, but we still considered that part of testing, so we showed the implementation date as 11/99.

And I was talking with Mr. Willemssen before the meeting, and I think that what might be occurring in some of those implementation dates is that we might have a little bit of a different definition.

I think that needs to be clarified when all of the, I think that's something we're going to take up at the Subcommittee the next meeting, and that we all have a clarification of what we mean when we say implementation.

Because to me, by definition, you can't implement until the ready date because you're not really manipulating real Year 2000 dates until they start to occur.

So I think there could be some, as is in the case I know with the Social Security Administration, the definition that you're using for implementation, our date would be 12/98, not 11/99.

Mr. BARTLETT. So we need to ascertain that that's the same situation for the other Agencies.

Ms. ADAMS. Yes, and I'm going to put that on the agenda for the next Subcommittee meeting because I think there might be a little confusion about how we all defined implementation.

Mr. BARTLETT. Thank you very much.

Mrs. MORELLA. And I want to congratulate you, Ms. Adams, for starting back in 1989, but it is also interesting that it's not totally completed, which says something about the time that's necessary.

I'm sorry to cut this so short.

Ms. ADAMS. Can I say one thing, Madam Chairwoman? Can I just say one comment to that?

Mrs. MORELLA. Yes.

Ms. ADAMS. We discovered it because a system broke and it was a very back burner project. We didn't really get cranking until around 1993.

Mrs. MORELLA. Okay, great. Well thank you for your candor.

I want to thank all of you so very much. And let you know that we have questions all ready to get to you.

Thank you for waiting and for being part of this very important project.

And the Subcommittee's meeting is adjourned.

[Whereupon, at 12:35 p.m., Thursday, July 10, 1997, the hearing was adjourned.]